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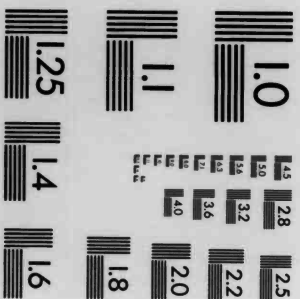
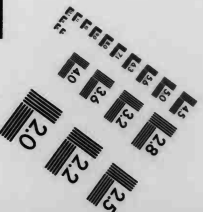
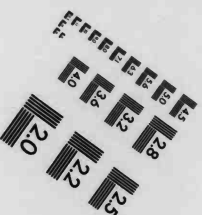
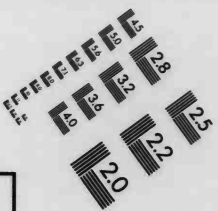
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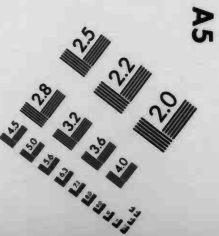
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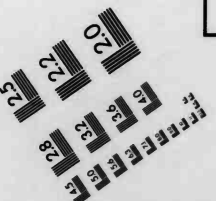
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BRITISH WAGES

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TRADE PROMOTION SERIES—No. 42

BRITISH WAGES

BY

CHARLES E. LYON

American Trade Commissioner, London



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CONTENTS

	Page		Page
Foreword.....	iv	Trade disputes—Continued.	
PART I.—WAGE DETERMINATION		Disputes in 1924 and 1925....	32
Methods of determining wages..	1	Causes.....	33
Diversity of methods.....	2	Duration.....	33
Relation of wages to cost-of-		Profit sharing.....	34
living index.....	2	Results of schemes.....	35
British cost-of-living index...	3	Profit sharing in 1925.....	36
Cost-of-living wages and real		Unemployment.....	37
wages.....	5	Membership in labor unions...	38
Industries employing the in-		Occupations in England and	
dex.....	5	Wales.....	38
Criticism of the cost-of-living		Broader aspects of the subject...	39
principle.....	6	Sheltered and unsheltered	
Illustration of cost-of-living		trades.....	40
principle.....	7	Wages in the United States....	41
Sliding scales based on selling		PART II.—WAGE RATES	
prices.....	8	Weekly and hourly time rates ..	45
Pig-iron manufacture.....	9	Wages and salaries.....	45
Determination of coal wages..	11	Limitations of the tables of	
Wage agreements of 1921 and		wages.....	46
1924.....	11	Sources of information.....	46
Coal-mining wages and earn-		Remuneration other than	
ings.....	15	wages.....	47
Interpretation of figures.....	16	Terminology in reports.....	49
Wages determined by trade		Comparative wage levels.....	50
boards.....	17	Wages in various occupations....	52
Criticisms of wage boards.....	18	Railway wages.....	52
Trade boards incentive to ef-		Coal mining.....	53
iciency.....	19	Iron and steel.....	55
Agricultural wages.....	20	Engineering and shipbuilding...	55
Collective agreements.....	21	Textiles.....	56
Deviation of agreements.....	24	Dock labor.....	57
Miscellaneous methods.....	25	Printing.....	57
Time rates and piece rates....	26	Public-utility service.....	57
Hours of work and overtime....	27	Building trades.....	57
Payment of wages for holidays..	29	Agriculture.....	58
Trade disputes.....	31	Wage changes of more recent	
Causes of disputes.....	31	periods.....	58
Settlements.....	31	Appendices.....	59
Methods of settlement.....	32	Brief bibliography.....	72

FOREWORD

In the present study British wages are discussed with relation to pre-war levels, methods of determination, and the recent experience of separate industries in attempting to regulate the wage factor.

British wage levels are doubly interesting to American manufacturers of goods for export; first, because wages represent such an important item in the cost of finished products and therefore affect the competitive position of American exported goods, 21 per cent of which go to the United Kingdom; secondly, the purchasing power of the British wage earner may affect vitally the demand for some of the products of American manufacture. It is not only the current wage level that counts; the chance of an early change, upward or downward, is of even greater significance.

Wages vary in different parts of Great Britain, not only between industries but also within the same industry; in fact, it is somewhat vain to try to determine just how much any worker receives for his labor. Any wage "rate" may vary widely from "earnings," which are controlled by the hours worked and the supplements and bonuses payable on a differing basis in each trade.

The methods of wage determination likewise show very little uniformity or stability. The most nearly definite statement that may be made is that wage relationships have radically changed since the pre-war period. Piece and time rates, skilled and unskilled labor, present very different aspects to-day from those of 1914.

British investigations have given particular attention to the bearing of the wage rates on two great economic problems. First, the ability to compete in world markets against countries where real wages are lower makes it necessary to determine the exact share of wages in the cost of every article manufactured for export. Second, the apparent cause-and-effect relationship between higher wages and greater prosperity in the United States makes it important to ascertain the effect of a higher wage policy if adopted in Great Britain. Consideration of these more general aspects of the wage question is included in the following pages.

As the situation develops, many of the facts and figures of this study may be superseded. The Regional Information Division of the Bureau of Foreign and Domestic Commerce will furnish such new information upon request to those interested.

JULIUS KLEIN, *Director,*

Bureau of Foreign and Domestic Commerce.

OCTOBER, 1926.

BRITISH WAGES

Part I.—WAGE DETERMINATION

METHODS OF DETERMINING WAGES

The only unchanging feature about British wages is the paradox that they are subject to constant fluctuations. In a stable world there might be a fair degree of stability in wages, but the economic disorder of the last decade has made a steady level of wages an impossibility.

It has not been within the power of either employer or wage earner to prevent this variation in wages but, unfortunately, this underlying economic law has not been sufficiently recognized by either party, the employer too often believing that the laborer's desire is to be paid more than he earns, and the worker, on the other hand, resorting too readily to strikes to prevent his earnings—his share of proceeds—from being withheld. There has been only a vague understanding as to the real share of the value of a finished product which should properly be allocated to wages and which to those who apply their capital and enterprise.

As a consequence of this lack of consensus of opinion there is current in Great Britain a great variety of methods of determining wages. In some instances there has been established a minimum wage. The mere existence of an irreducible minimum of this sort gives the figure undue weight, in the worker's mind, as the level of wage the employer must be disposed to pay and which he can be prevented from paying only by solidarity on the part of workers. And, of course, the mere existence of such solidarity acts as a constant challenge to a test of strength. In this connection it is unfortunate that such theoretical topics as "the poverty line" for wage earners is even discussed at all, so long as it remains in practice a theory rather than a vital condition.

Other methods of wage determination are represented by negotiations between payer and payee, or their representatives, ranging all the way from the direct appeal by an individual worker to his employer to formal negotiations between central labor organizations, associations of employers, and a third group representing the public, such as the three-part membership of the national wages board that hears many crucial cases dealing with railway wage payments.

For present purposes the most practical outline of British methods of determining wage payments is the fivefold classification made by H. B. Allin-Smith in "Representative Wages and Wage Bases in Great Britain," Trade Information Bulletin No. 91, April, 1923,

United States Department of Commerce. He differentiates among the following schemes:

- A. Periodical negotiation between employers and unions.
- B. Local wages boards and trades boards.
- C. Sliding scale in accordance with profits.
- D. Sliding scale in accordance with the selling prices of key products.
- E. Sliding scale in accordance with the Ministry of Labour cost-of-living index.

This classification is adopted in this study, but in view of the significant development since the date of the above bulletin the discussion is along somewhat different lines and in different order.

DIVERSITY OF METHODS

The lack of uniformity in the British wage principle is very clearly illustrated in the monthly summary which the Ministry of Labour Gazette prints under the heading "Changes in wages and hours." This table specifies in detail the industry, the particular locality, the date at which the change became effective, the exact class of labor represented, and the exact character of the change for different grades of labor in the particular industry and district. Different rates apply according to age, sex, term of employment, district, and branch of the trade. Not only is this true but the principle whereby the rate changes up or down is apt to be different for each of the above classifications. To show how great the diversity is, the Labour Gazette summary of wage changes during March, 1926, has been restated (Appendix I) according to the principle of wage change involved. It should be noted that each monthly summary deals only with workers whose wages have altered during the month; nowhere is a complete conspectus of the whole wage situation throughout Great Britain available, because of the constantly changing status.

RELATION OF WAGES TO COST-OF-LIVING INDEX

That 2,500,000 British workers in all types of industry have agreed that their wages shall be controlled by an index number shows the degree to which a technical principle of statistical comparison, which in pre-war days existed mainly as one of the mystical formulæ of economists, has become a commonplace of everyday life, which is accepted as representing as essentially a part of present-day existence as do the automobile and the radio. The index number is accepted by the masses, just as the automobile is, although its mechanism is no more completely understood by all who use it. In the case of the automobile this lack of technical knowledge is of no great consequence, as service stations exist for the purpose of supplying just such expert assistance. In the case of the cost-of-living index, on the other hand, there is no service station which can deftly correct what may appear to the wage earner to be faulty operation. The index is merely the expression of an economic law and must rise or fall as the law compels. While it is rising and carries the level of wages upward it naturally arouses no protest; when it starts down the scale, however, the same protest arises that accompanies every period of readjustment and retrenchment.

This protest on the part of the practical man, who sees his resources cut down by an index which he does not understand and who comes to suspect a trick in it, may be accompanied by dissatisfaction on the part of the theoretical economist, who has no financial interest at stake but who is professionally averse to a man-made scheme which interferes with economic law. It is a common principle that wages lag behind prices, both in the upward and downward movements. Whether desirable or not, this has been the universal experience. When now a portion of British wages is artificially controlled by a scheme which, if correctly applied, does not permit the familiar lag, the basis of comparison with other economic periods is disturbed. The operation of the wage control becomes accordingly an additional variable for which the economist must make allowance in his analyses.

A cost-of-living index as the controlling factor in determining wages is subject to various inherent defects.

(a) When the control is first adopted every care should be taken that a truly representative index has been found. Corrections are very hard to apply later if they involve changes in wages of millions of men. After a correct base has been set, minor corrections should be made as conditions warrant.

(b) The costs must represent a general average over the country rather than urban as against rural, or industrial as against agricultural communities, since the control must be applied as a whole. The accounting departments in industry can not be expected to employ involved methods. Simplicity is an essential factor.

(c) The country in which it is adopted must not show highly divergent conditions in different parts, but must be fairly uniform.

(d) Wages controlled by the index must keep fairly close pace with wages determined by other methods. In some trades the cost-of-living index can not be applied and discontent would quickly arise if there were serious discrepancies in wages.

(e) There should be some uniformity in the ratios accepted. That is, approximately the same number of points change in the index should be the basis of a change of 1 penny or a given percentage of wages.

(f) The control by the index should not be interfered with. That is, employers should not anticipate a change in the index by raising or lowering wages, or, on the other hand, delay the adjustment until a given month or stage of the calendar or financial year.

(g) Finally, control by the index should have as few supplements as possible. That is, automatic operation should not be interrupted by bonuses or special allowances or deductions.

An index showing any one of these defects is undependable to that extent; if it shows many, or perhaps all, of them it is bound to fail sooner or later and involve labor trouble when the change to a new principle is considered. In this study the operation of the British principle is discussed, but it is left for the reader to check the application of the principle against the above ideal requirements.

BRITISH COST-OF-LIVING INDEX

The official figure of the cost of living is that compiled by the Ministry of Labour along lines laid down in the Labour Gazette of

February, 1921, and July, 1923. Reviews of the principle appear from time to time in the Gazette.

The base is July, 1914, rather than an average of pre-war years, as statistics were not available. The items are the usual five—food, rent, clothing, fuel and light, and miscellaneous (car fare, newspapers, tobacco, and certain household necessities). To secure a representative cost for workers the ministry examined budgets of some 2,000 working-class families throughout the country. The prices are those at retail, another index reporting wholesale prices. A system of weighting in accordance with relative importance of items is then applied in order to arrive at the final index figure.

The cost of living, as thus computed, showed the following increases over pre-war during the period of greatest degree of instability:

Year	Food	Rent	Cloth- ing	Fuel and light	Other	Total	Year	Food	Rent	Cloth- ing	Fuel and light	Other	Total
1919.....	119.0	5	261.0	93.0	93	115	1922.....	76.0	53	139.0	102.0	95	83
1920.....	156.0	21	316.0	112.0	121	149	1923.....	69.0	48	122.5	84.0	84	74
1921.....	129.5	48	203.0	142.5	112	126	1924.....	70.0	47	125.0	86.0	80	78

The Committee on Industry and Trade, in its Survey of Industrial Relations, gives the following table of increases in the cost of living and in weekly full-time wages, by quarterly periods:

Date	Average increase over the level of July, 1914, in—		Date	Average increase over the level of July, 1914, in—	
	Cost of living	Weekly full-time wages		Cost of living	Weekly full-time wages
1920:			1922—Continued.		
March.....	132	130-135	September.....	78	75-80
June.....	132	130-135	December.....	78	70-75
September.....	164	160-165			
December.....	165	170-180	1923:		
1921:			March.....	74	70
March.....	133	160-170	June.....	69	65-70
June.....	119	145-155	September.....	75	70
September.....	110	130-135	December.....	77	65-70
December.....	92	110-115	1924:		
1922:			March.....	73	70
March.....	82	100-105	June.....	70	70
June.....	84	85-90	September.....	76	70-75
			December.....	80	70-75

¹ Nearly.

The wage table includes all industries, not only those which tie wages to the cost-of-living index. Consequently the figures show the familiar lag.

By the first date given wages had caught the cost of living in its upward climb. They lagged behind during the 1921 deflation but became approximately even again from the middle of 1922 to early 1923. Thereupon the cost of living rose again and wages trailed along, with a lag of a few months.

COST-OF-LIVING WAGES AND REAL WAGES

A wage increase is not a true increase in value unless the larger sum will buy more than the smaller sum could command. In many instances the purpose of wage increases has been to enable the worker to maintain his standard of living. The success of this endeavor, in the face of a complexity of industrial problems, is one of the most striking features of recent British wage history. The point has been so clearly stated by the Committee on Industry and Trade that their opinion is quoted herewith:

In the first 10 months of 1920, while the rise in rates of wages and in the cost of living, which had continued almost without interruption since 1914, was still in progress, the average percentage increase in weekly full-time rates of wages, as indicated by these two series of figures, was roughly the same as that in cost of living. In November, 1920, however, the cost of living began to fall, while rates of wages continued to rise until the end of the year, and at the beginning of 1921, "real" wages for a full working week were slightly higher, on average, than in July, 1914. Early in 1921 rates of wages began to decline, but the fall in cost of living continued and "real" wages for a full week remained higher, on average, than in July, 1914, until the summer of 1922, when the downward movement in wage rates overtook that in cost of living. From that date until the end of 1924 the average percentage increase in wage rates as indicated by these figures, was generally a little below the average increase in cost of living, although the wages figure for the end of June, 1925, was slightly higher than that relating to cost of living. In view of the qualifications (described at the beginning of the previous memorandum) to which the figures relating to wage rates are subject, no great significance can be attached to the relatively small differences shown during the past three years. The figures suggest, in fact, that the average level of "real" wages for a full week is not at present substantially different from the pre-war level, and that if allowance is made for the widespread unemployment and short time now prevailing in many industries, the average level of "real" weekly earnings must be lower than it was immediately before the war.

In view, however, of the great diversities in the increases in money rates of wages since 1914 among different industries and occupations, it will be realized that there are wide variations in the circumstances of different groups of workers, the "real" wages of some groups being much lower than in 1914, whilst those of others are considerably higher.

The reasons for some of these disparities are revealed to some extent by the sections of this report that deal with separate industries.

There is always something alluring in a comparison of international conditions in any particular, but all broad generalizations of this sort are apt to be deceptive, as it is almost impossible to find a common denominator for all large cities or countries. This is especially true of wage comparisons, as no two cases are exactly parallel. One should avoid such facile comparisons unless they are taken with more than the customary grain of salt. With this preliminary caution the table (Appendix II) showing real wages in London and several other great cities is given.

INDUSTRIES EMPLOYING THE INDEX

Among the hundred or so industries and services in Great Britain that use the cost-of-living principle in determining wages the following are selected from a list given in the Labour Gazette for July, 1925:

Metal trades:
Electrical cable making.
Steelwork erecting.
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Metal trades—Continued.
Heating and domestic engineering.
Typefoundry.

Metal trades—Continued.	Building and allied trades—Con.
Pig-iron manufacture.	Civil engineering construction.
Chain making.	Public works.
Textile trades:	Asphalting.
Woolens.	Transport trades:
Bleaching, dyeing, printing, and finishing.	Railway service.
Machine calico printing.	Road transport.
Silk manufacture, dyeing, and finishing.	Coal tipping.
Hosiery.	Canal service.
Carpets.	Furniture moving.
Clothworking.	Public administration:
Clothing trades:	Civil service.
Boots and shoes, manufacture and repairing.	Electricity.
Dyeing and dry cleaning.	Gas.
Food and drink trades:	Water.
Seed crushing and oil milling.	Omnibus service.
Brewing.	Municipal nontrading services.
Baking.	Other:
Woodworking and furniture trades:	Agriculture (partially).
Furniture manufacture.	Quarrying.
Packing case making.	Iron-ore mining.
Sports goods.	Paper making.
Building and allied trades:	Bricks and tiles.
Building.	Export packing.
Electrical contracting.	India rubber manufacture.
	Leather, saddlery, and harness.
	Retail boot shops.
	Brushes and brooms.

In some of the above instances only restricted areas are included, while in others the application is to the whole of Great Britain and Northern Ireland.

To show the diversity of arrangements for keeping wages in line with prices, the following examples are selected from a variety of trades:

	Fluctuations in index before wage change
Seed crushing.....	4
Railways.....	5
Electricity supply.....	6
Furniture.....	6½
Municipals nontrading.....	7
Civil engineering construction.....	7½

and so on, up to trades that call for 15-point variations before adjustment of wages. Similarly the amount of variation in wages ranges from a penny upward.

CRITICISM OF THE COST-OF-LIVING PRINCIPLE

It is clear from the above that there is no standardization either of the degree to which the index must change to call for a wage adjustment or of the amount of such adjustment. That is, the supposedly automatic principle leaves room for bargaining or controversy. Second, there are various kinds of payments in addition to that governed by the index and there are instances as well in which the adjustment as of any one date is anticipated or deferred. Third, some trades require such a wide variation in the index before wage adjustment that the result is practically a fixed wage except in times of unusual instability. There is consequently the feeling that faithful service does not receive prompt enough recognition in higher

pay. To sum up, the chief value of the index principle is its usefulness at times of heavy inflation followed by severe depression, as forcibly illustrated from 1919 to 1921.

The chief defect in the index principle lies in its incapability to reflect the true living costs of all grades of workers in all parts of the country. It takes no account of the psychology of a boom which places the workers on a different plane from that to which they had been accustomed; the automatic decline of the cost of living breaks their grip upon some of the advantages or semiluxuries in which they had indulged in more prosperous times and brings about a certain dissatisfaction which must be reflected in their work. In this connection it is important to note that the original purpose of the index as a guide to wages was to show the average increase in the cost of maintaining unchanged the pre-war standard of living of working-class families. The question is: Should this standard remain unchanged or should actual improvement be maintained? The question is in part answered by the fact that several trades once under the index principle have withdrawn.

The Trades Union Congress lists the objections which workers find in the cost-of-living method of fixing wages. First, there is dissatisfaction with the Ministry of Labour index as compiled; no other exists which may be substituted, and until normal trade is restored the present table can not be revised. Second, labor claims that there is a tendency for "real" wages to be kept at the level at which the index is adopted by a trade. Third, it is felt that higher-paid workers derive less advantage than the lower paid. Finally, labor in some instances finds such a sliding scale "degrading," because it suggests that a minimum wage is being paid. On balance, however, the cost-of-living system is advantageous to workers, as (a) it eliminates the friction incidental to wage controversies, and (b) it leaves unions free to concentrate upon an improvement in real wages.

ILLUSTRATION OF COST-OF-LIVING PRINCIPLE

British railways represent the best illustration of the application of the cost-of-living index to wages, principally because so many men are employed; because of close relationship during war time to the Government; and because such a lengthy series of wage topics have come up for adjudication since the armistice. The railways were not strongly unionized before the war, and they still preserve an independent stand in general trade crises. It is true, however, that they observed in principle the general strike of May 1, 1926, although not strongly affiliated with the Trades Union Congress. In view of their experience following the failure of the strike, it will be interesting to follow the future attitude of railway unions.

Perhaps the best survey of railway wage developments in recent years is presented in a skeleton outline. Any continuous and interpretative text would make the study exceed the space limit that can be spared in a study of the present sort.

A cost-of-living sliding scale was proposed in November, 1918. It was not standardized, met with objection, and did not become operative.

December, 1918.—Eight-hour day arranged, operative February 1, 1919.

December, 1919.—Wage rates discussed, unions desiring that maximum, with bonus, be taken as standard.

March, 1919.—Guaranteed day and week established. Wages stabilized for remainder of year. Overtime discussed.

August, 1919.—Wages of drivers, firemen, and cleaners adjusted. One hundred and twenty miles, one day's work. Each extra 15 miles, 1 hour.

September, 1919.—Strike followed dissatisfaction with wage of other grades than above. Stabilization extended to end September, 1920. Minimum of 51s. per week unless cost of living fell below 210.

December, 1919.—Central and national wages board established, the national board considering points over which no agreement elsewhere could be reached.

March, 1920.—Wage dispute, unions asking full standardization and a base minimum rate with 1s. variation for each 5-point change in the index.

April, 1920.—Central board approved increases. Boom period raised prices, index, and hence wages.

May, 1920.—National board appealed to to decide demand for additional 20s. per week. Board approved 10 per cent increase in London area, 5 per cent rural.

1921, 1922.—Deflationary movement continuously reduced prices, locomotive grades reaching standard minimum in April, 1922.

November, 1923.—Railway companies asked broad changes, some of which were granted by national board.

January, 1924.—Strike followed refusal to accept awards. The outcome was a lengthening out of period when full decline need be taken.

November, 1925.—National Union of Railwaymen presented extensive claims calling for additional annual expenditures of £45,000,000. Counter claims were presented by the companies to cut wages and bonus.

January, 1926.—The national board refused both appeals but upheld rule that new employees may be taken on at "B" (lower) rate. The decision was rejected but strike was decided against by narrow vote.

May, 1926.—Railways on strike in compliance with call of Central Council of Trades Union Congress. Wage questions again to the fore when men returned to work.

The lengthy chronology is given to show that no scheme, no matter how nearly automatic or how widely used, could tide a great institution like the railways over such a crisis as that represented by the years of boom and depression. The extreme ranges were too far apart and the changes in the scale too precipitate to permit smooth functioning; the human element was bound to be intruded. Too many men and grades were concerned. In March, 1923, there were 681,000 employees in four railway groups, including 106,496 mechanics and artisans, 75,773 clerks, 63,312 permanent waymen, 36,708 engine drivers and motormen, 36,698 firemen, 29,507 signalmen, 27,679 passenger and 20,717 freight porters, 17,987 shunters, 16,576 freight and 7,899 passenger guards, 19,203 carters and guards, 11,698 checkers, 7,054 carriage cleaners, 5,069 loaders and sheeters, and 5,451 ticket collectors, among the principal operating grades.

The changes in wages and earnings of these operatives over recent years are shown in Appendix III.

SLIDING SCALES BASED ON SELLING PRICES

The wages of some 1,500,000 workers are related to the selling price of the product. This total includes coal mining, although to a less complete degree than was once the case. Other industries using selling prices as the determinant of wages are iron and steel, iron mining, limestone quarrying, coke manufacture, and tin plate.

Some of the details of the application of the selling-price principle, abstracted from the Labour Gazette for August, 1925, are given herewith.

PIG-IRON MANUFACTURE

Cleveland No. 3 pig is generally regarded as a good barometer of iron prices. To decide as to the price, two accountants, chosen by owners and workers, study the sheets of selected firms. When these show a figure of 67s. 6d. a ton, standard wages (time rates, often plus a bonus) are paid and fluctuations of 3d. a ton (equals three-eighths of 1 per cent) are followed up or down by one-fourth of 1 per cent changes in the standard. The ascertainment, as the accountants' decisions are called, are revised every quarter year, the wage change coming a month later.

In Cumberland and north Lancashire such ascertainment are made every two months, the iron and steel trade in general being about equally divided between two and three month ascertainment. The general nature of the wage control is illustrated in the following summary:

District and product	Standard price	Fluctuations in—		Dates
		Price	Wage	
Cleveland No. 3 pig.....	s. d. 67 6	s. d. 0 3	Per cent ¼	January, 1924.
West coast hematite.....	70 0	2 4	¼	1919.
Northamptonshire.....	1 40 0	2 4	¼	1922.
South Wales and Monmouth:				
Rails, 20 pounds per yard.....	85-130 0	3	¼	
Steel tin bars.....	130 0	6	¼	
Siemens Steel Works, steel tin bars.....	100 0	2 6	1¼	Plus bonus.
Steel rolling and puddling:				
Northern England.....		3	2½	To 1919. ¹
Midlands.....		3	2½	To 1919. ¹
Coke and by-products.....	25 0	6	1	
Tin-plate manufacture.....	150 0	2 6	1¼	Plus special advance.
Galvanized sheets.....	150 0	5 0	2½	

¹ Standard price before 1922 was 47s. 6d.

² Or over.

³ After 1919 variation of 10 per cent for each fluctuation of £1 in selling price.

⁴ Standard wage after 1919, 13s. 6d. per ton.

Some of the arrangements are too complicated for easy codification. Thus, for Cleveland iron-ore miners an agreement of August, 1919, placed the bargain price at 18s. 9d. per shift for underground miners, the minimum wage for miners at 14s. and that for leading laborers at 10s. 9d. These were related to an assumed price of 204s. 6d. per ton for Cleveland hematite pig iron, mixed numbers 1, 2, and 3. Each variation of 1s. in the selling price was to be accompanied by 1d. per shift variation for higher-paid work. A minimum wage equivalent to 75s. per ton was agreed upon. In January, 1925, a 1s. per shift bonus, with a cost of living range of variations, was agreed upon for eight months.

Not all the workers at any plant are governed by the same scheme and other than selling-price arrangements may exist. In some instances a joint conference of employers and workers is held after accountants determine the selling price for any period. In Trade Information Bulletin No. 247 Allin-Smith writes:

It is estimated that more than 90 per cent of those employed in the heavier metallurgical trades now receive wages based on this principle of periodical sliding-scale adjustment according to selling price. The earnings of highly

skilled men—those acting as foremen or directing the output of a mill, for instance—generally receive earnings computed on a part-tonnage (output) basis, applied in conjunction with the sliding-scale principle. The tonnage schedules are commonly arranged on actual or conservatively estimated outputs rather than on estimates of theoretical or potential output. These features give a wide variation to earnings of many metal workers, especially the more skilled and valued men, as between different periods of time, districts, plants in a district, or even mills within the same plant.

It is considered a high level of accomplishment, however, if a steel worker attains £10 or more (from \$50 up) weekly.

From the preceding statement it is seen that the sliding scale of wages on a selling-price basis, while very broadly accepted, is not a rigid arrangement but subject to frequent restatement of principle, while the resulting earnings are not infrequently supplemented by a bonus of one sort or another. Whether the arrangement is more flexible than the cost-of-living basis it is difficult to say. There has been occasional criticism to the effect that selling prices are dependent upon production and sales policies and upon the size of a firm to such a degree that fluctuations may not represent economic law, which is intended to guide wages, so much as arbitrary decisions of a directorate. This criticism must originate with theorists rather than with workers in the industry, as the conditions in iron and steel production are on the whole the most satisfactory in Great Britain.

A writer in the London Times Trade Supplement says:

Amidst the periodical turmoil of industrial disturbances of recent years it has always been possible to turn to at least one industry where friendly relations and absence of strike between employers and workers could be found. This bright spot is the iron and steel industry. Yet it is admittedly one of the most depressed and one in which the level of wages is possibly lower than that in any other of the unsheltered trades. It has been asserted that there has been no organized dispute involving workers engaged in the production of steel for over 30 years.

At a time when some of the staple industries are vainly searching for a solution of their wage problems and for methods by which wages in future may be adjusted, the conditions under which peace has been assured for so long deserve a careful examination.

The arrangements work with perfect smoothness, but in an industry in which the methods of wages payment are of more than average complexity problems other than the simple periodical adjustment arise. The way in which such problems have been solved provides further evidence of the success of the negotiation machinery in the industry. Numerous instances might be quoted, but a few will suffice. The extent of the fall in iron and steel prices during the last two or three years has resulted in very heavy reductions in wage rates, and in some districts the wages of the lower-paid men reached a very low level. The fact was realized by the employers and the position was discussed. As a result, various arrangements have been made to mitigate the cases of hardship. In Cumberland, for instance, it was agreed early this year that a special temporary bonus should be paid.

Not only, therefore, is the present level of wages very low but the decline since the highest point has been considerably more marked than in most other industries. The absence of resistance on the part of the operatives is, on this account, somewhat remarkable. Several reasons have been advanced to account for it, but the truth would appear to lie in the fact that the workers willingly submit to wage reductions, having the assurance, through the existence of their sliding scale agreements, that when prices rise and trade improves they will share in the prosperity.

The determination of wages by selling-price levels is discussed by Mr. and Mrs. Sidney Webb in their volume *Industrial Democracy*, their attitude being thus summarized by the Trades Union Congress publication *Industrial Negotiations and Agreements*:

The method puts the worker in the position of a humble partner, entitled to a share in the product but without any voice in the management, although efforts have been made to correct this. The sliding scale is based on the theory that supply and demand should determine the workers' wages, while the general trade-union view is that, an adequate wage for all workers should be a first charge on the industry.

In general the method seems a very risky one. It is of doubtful wisdom even from the point of view of self-interest.

It would seem to the outsider that one of the essential requirements in the adoption of any "up and down" scheme would be its acceptance in all its implications; if deviated from at one time the beneficiaries are entitled to look for similar action whenever automatic action calls for revision of rates. The following quotation from the Iron and Coal Trades Review for October 16, 1925, illustrates the point:

The action of the Cleveland mine owners in not insisting on reductions of wages indicates the great generosity shown to the men in periods of difficulty. The ascertained prices of pig iron showed a fall from 76s. 5.21d. to 71s. 4.11d. per ton, a difference of 5s. 1.1d. In normal circumstances the decline in prices would have enabled the owners to reduce wages by the equivalent of 6.3 per cent on the base rates. Had the owners decided that wages should be paid strictly according to the agreed scale, they would have been entitled, on the ascertained prices for the quarter, to lower wages by 11.4 per cent. For the second time, however, they agreed to forego any reduction, and wages thus will remain unaltered for the next three months. Including the 5 per cent, usually allowed by the owners, wages now stand 16.3 per cent above the scale.

Such a generous policy, however admirable, may create a dangerous precedent and interfere with the working of the scheme.

DETERMINATION OF COAL WAGES

As wages of coal miners were at one time determined on the same basis as iron and steel wages, it is appropriate to discuss them at this place, although the present method of determination puts coal more properly in the class of industries in which wages are related to profits. As the coal-wage problem has been the subject of continuous and more and more acrimonious discussion from November, 1924, until the great strike of May 1, 1926, of which the coal dispute was the direct cause, it is necessary to go into considerable detail in explaining the whole position.

WAGE AGREEMENTS OF 1921 AND 1924

After control of the mines had ended and following the three months' stoppage from April to June, 1921, it was decided to adopt a more automatic method of determining wages than that based on selling prices, as these inadequately reflected economic conditions through failure to allow for changes either in the costs of production or in the volume of trade. The 1921 agreement was accordingly drawn up.

This agreement was pronounced by the recent coal commission to be a landmark in progress to better relations between employers and employed. The commission quotes the United States Coal Commission as follows:

The common interest in continuous and successful operation finds a concrete expression in the British wage agreement * * *. The plan is equitable * * * and after a longer trial this form of adjusting wages may prove to bring about the highly desirable full cooperation of employer and employee in seeking efficiency.

Agreement of 1921.—The wages payable in each of 13 districts shall be expressed in the form of a percentage upon the basis rates prevailing in the district and shall be periodically adjusted in accordance with the proceeds of the industry as ascertained in such district.

The amount of the percentage to be paid in each district during any period shall be determined by the proceeds of the industry in that district during a previous period, as ascertained by returns to be made by the owners, checked by joint test audit of the owners' books carried out by independent accountants appointed by each side.

The sum to be applied in each district to the payment of wages above the standard wages as hereinafter defined shall be a sum equal to 83 per cent of the surplus of such proceeds remaining after deduction therefrom of the amounts of the following items during the period of ascertainment:

- (a) The cost of the standard wages.
- (b) The costs of production other than wages.
- (c) Standard profits equivalent to 17 per cent of the cost of the standard wages.

The share of the surplus applicable to wages shall be expressed as a percentage upon the basis rates prevailing in the district; provided that if in any period the ascertained proceeds, after deduction of costs other than wages and the cost of the standard wages, prove to have been insufficient to meet the standard profits, the deficiency shall be carried forward as a first charge to be met out of any surplus, ascertained as above, in subsequent periods.

If the rates of wages thus determined in any district do not provide a subsistence wage to low-paid day-wage workers, such additions in the form of allowances per shift worked shall be made for that period to the daily wages of these workers as, in the opinion of the district board, or, in the event of failure to agree by the parties, in the opinion of the independent chairman, may be necessary for the purpose. Such allowances shall be treated as items of cost in the district ascertainment.

The standard wages shall be the district basis rates existing on March 31, 1921, plus the district percentages payable in July, 1914 (or the equivalents in any district in which there has been a subsequent merging into new standards), plus, in the case of pieceworkers, the percentage additions which were made consequent upon the reduction of hours from eight to seven.

In no district shall wages be paid at lower rates than standard wages, plus 20 per cent thereof.

At a meeting of the National Coal Board held at the mining association offices, on January 17, 1924, the secretary of the miners' federation reported that the ballot of the miners had resulted in a majority of 395,745 in favor of termination of the agreement of 1921. It came to an end on April 17, 1925.

Agreement of 1924.—This was reached on May 15, 1924, and embodied the following principles:

Standard profits to consist of a sum equal to 15 per cent of standard wages, instead of 17 per cent.

The surplus of the proceeds to be divided up between wages and profits in the proportion of 88 per cent and 12 per cent, instead of 83 per cent and 17 per cent.

Minimum percentage on standard wages to be 33½ per cent, instead of 20 per cent.

The wages of any adult able-bodied day-wage workman not to fall below a figure 40 per cent above the standard wages (1921 agreement) of the lowest paid class of day-wage workmen.

In addition, subsistence wages shall be paid in those areas in which they have been or may in future be fixed by the district board.

There shall be effective recoupment of deficiencies below standard profits, but only one-third of any future surplus available for this purpose in any one ascertainment shall be so divided between wages and profits in the agreed proportions, any balance of the deficiency being again carried forward.

This 1924 agreement came into force on May 1, 1924, and was ended in July, 1925, the owners having given the necessary notice.

On July 1 a set of proposals was made by mine owners but rejected by the miners.

On July 30 the Government asked owners to withdraw their terminating notice while a Royal commission studied the situation, the Government in the meantime offering financial aid—"a subvention in aid of wages" during nine months, to May 1, 1926. The 1924 agreement was maintained, but in any month in which wages calculated in accordance with the recognized ratio of division between wages and profits would be lower in any district than the wages payable at the minimum percentage under the agreement, the deficiency to be made up by the exchequer.

As a consequence, the Government outlay upon the subvention to wages, or subsidy, as it came to be called despite official protest, amounted to almost £25,000,000 by May 1, 1926. Something over £19,000,000 was taken up in the 1926-27 Government budget by increasing the payment toward sinking fund from £10,000,000 to £20,000,000.

Some nine weeks before May 1, 1926, the coal commission presented a most voluminous and detailed report which subjected every aspect of the coal industry to a most searching analysis and proposed concrete recommendations calling for definite performances upon the part of mine owners, mine workers, and the Government.

None of the three parties took any relish in the program to which it was asked to commit itself. Government action was summed up in 14 points that in many minds represented a long step toward nationalization; the owners were to give up their desire for district rather than national wage ascertainment and to undertake various other measures that appeared to them extreme; the workers were told that certain downward adjustments in minimum wages were indispensable.

The Government promptly announced acceptance of the report if the other two parties would accept. The owners followed after a brief period, though with many misgivings. The workers, however, guided to some extent by the slogan "not a penny off the pay, not a second on the day," withheld acceptance of the spirit of the report prior to entering negotiation of a new agreement. The particular passage that met objection leading finally to the shutdown and to the declaration by the Trades Union Congress of a general strike was the following paragraph in the summary of findings:

If the present hours are to be retained, we think a revision of the "minimum percentage addition to standard rates of wages," fixed in 1924 at a time of temporary prosperity, is indispensable. A disaster is impending over the industry, and the immediate reduction of working costs that can be effected

in this way, and in this way alone, is essential to save it. The minimum percentage is not a "minimum wage" in the usual sense of that term. The wages of the lowest paid men will be safeguarded by a continuance of the system of subsistence allowances. The reduction that we contemplate will still leave the mine owners without adequate profits in any of the wage-agreement districts, and without any profits in most districts. If trade improves and prices rise, a profit will be earned. If prices do not rise, an adequate profit must be sought in the improved methods which should in any case be adopted.

It was held by the Government that further negotiations would be useless unless this statement were accepted in spirit. The general strike that followed lasted nine days, to be closed by the withdrawal of the order of the Trades Union Congress, although coal mining was not resumed, along with other industries, on May 10. The action of the trade union followed certain proposals by Sir Herbert Samuel, chairman of the coal commission, recasting the procedure called for by the coal report but not altering the general intent. On May 14 the Prime Minister submitted to the mining association, representing owners, and the miners' federation, representing workers, elaborate proposals for settling the dispute. The sections relating to wages were as follows:

For a period not exceeding ----- weeks:

1. The miners will accept a reduction of ----- per cent in minimum wages (other than subsistence rates) in all districts.
2. The owners will bear wages equivalent to 100 per cent of ascertained net proceeds (in January-March) so far as necessary to maintain those wages.
3. The Government will fill the gap with a subsidy to be debited against the £3,000,000 aforesaid.

In the meantime:

1. A board shall be set up consisting of three representatives of the coal owners and three representatives of the miners, with an independent chairman.
2. The board shall frame a national wages and hours agreement governing the principles on which the general wage rates should be ascertained in each district, and shall also decide the minimum percentage on basis, taking into consideration the state and prospects of trade, the reorganization proposals of the commission, and other relevant factors.
3. Subsistence wages shall not be reduced in any district where they at present yield 45s. per week or less for a full customary week.
4. The board shall decide also what the districts shall be.
5. The board shall issue its decision within three weeks.
6. In the event of disagreement in respect of wages the decision shall rest with the independent chairman.

If the parties agree that it is advisable that some temporary modification should be made in the statutory hours of work, the Government will propose the necessary legislation forthwith and give facilities for its immediate passage.

Any balance of the £3,000,000 aforesaid will be available for a "tapering" subsidy after the period referred to in paragraph 5, or such other purpose as may be agreed upon between the Government, the mining association, and miners' federation.

The provisional undertakings made by the Government in this memorandum are conditional on the acceptance of its terms by the other parties.

Like all earlier proposals, this met objection and the coal strike continued. Toward the middle of July the "permissive" eight-hour bill was passed, making it no longer illegal for owners to quote eight-hour terms or for the miners to work that long. On this basis a new set of wage proposals was made by owners which called for the same rates as before the strike for about three-fourths of the workers, higher rates for a few, and lower rates for about one-fifth of the 1,074,395 miners who were engaged when the strike came. At the date of writing the strike is still in force but it is possible to give the following approximate effect of the wage proposals by districts:

Districts	Per cent of all miners	Underground		Surface	
		Hewers	Timbermen	Laborers	Pithead screenmen
NO REDUCTION					
South Wales.....	20½	s. d. 90 6	s. d. 67 11	s. d. 52 9	s. d. 54 6
Yorkshire.....	16	83 2	77 9	55 3	55 10
Scotland.....	11½	71 0	73 0	54 1	41 1½
Lancashire, Cheshire, and North Staffordshire.....	11½	74 10	62 9	51 0	47 9
Nottinghamshire and Derbyshire.....	10	85 5	76 4	56 2	52 4
South Staffordshire and Salop.....	1	82 9	53 1	45 7	40 1
Leicester.....	¾	72 5	57 0	45 10	39 8
South Derbyshire.....	¾	79 7	62 1	46 5	44 6
Forest of Dean.....	¾	63 2	46 8	43 4	37 3
Somerset.....	½	52 2	44 1	40 11	43 10
Bristol.....	¼	69 4	53 8	47 1	54 8
INCREASE ON APRIL					
Cannock Chase.....	2	75 5	60 4	47 5	42 7
Warwick.....	2	86 0	68 10	50 6	48 0
REDUCTION OF 10 PER CENT					
Durham.....	14½	64 6	58 3	42 5	51 9
Northumberland.....	5½	59 5	56 6	41 4	57 6
North Wales.....	1½	(1)	(1)	(1)	(1)
Cumberland.....	1	(1)	(1)	(1)	(1)

¹ Not yet published, July 10.

The table does not indicate what collieries were to close down entirely or the number of miners thereby left without any wages: the table should, therefore, not be quoted as an absolute basis of comparison with earlier coal wages or with wages or earnings in other industries.

COAL-MINING WAGES AND EARNINGS

The prestrike status of coal workers is discussed in the coal report as follows:

The highest wage given for coal mining in the table—13s. 10d. per shift for hewers—works out, as there shown, at five and one-half shifts, to 76s. a week. The actual rate varies considerably by districts. In the principal districts the highest earning is nearly 15s. 6d. a shift, say 85s. a week in South Yorkshire and just over 15s. in South Wales; both these districts, as it happens, have a six-day week, so that the earning for a full week is over 90s. The lowest money earning is 12s. a shift in Northumberland, but the hewer there, if married, gets a free house and free coal; with the value of these privileges his weekly income at five and one-half shifts is 73s. or upward. The lowest earnings in any district of any size, taking house and coal privileges into account, are about 70s. in Lancashire and Scotland and parts of the Midlands. As against house and coal privileges, something must be set for deductions on account of explosives and other charges. Broadly, it may be said that hewers' average earnings for a full week at the present minimum percentage range from £3 10s. to £4 10s. for the whole country, since six shifts are commoner than five and one-half as a full week, something over the 76s. given in the table would be a fair figure.

The lowest adult mining wage in any of the large districts is represented by the man on subsistence at 7s. 6½d. a shift in Lancashire. There a six-day week is the rule, so that a full week's earnings is 45s. The subsistence wage in Northumberland and Durham, where 11 days only are worked each fortnight, is also in the neighborhood of 7s. 6½d., yielding a full money wage of 41s. 6d., but in these districts all married men get, in addition, free coal and free houses or allowances in lieu thereof. In Yorkshire the lowest paid man gets 8s. 9d. a shift and may work six shifts a week, making 52s. 6d. In Scotland the subsistence wage is 7s. 10½d. a shift with a proviso that the allow-

ance added in any particular case shall not exceed 1s. 1½d.; something less than 7s. 6d. may therefore be paid in some cases. In Cammoch Chase, subsistence wages range from 6s. 10¼d. to 8s. 0¾d., and in most of the smaller districts they are lower, down to 6s. or thereabouts. The Lancashire figure of 45s. may be taken as fairly representing the lowest adult wage for a full week's work over any large district.

INTERPRETATION OF FIGURES

A memorandum submitted by the miners' federation to the coal commission is repeated in effect in the Labour Bulletin for January, 1926, as published by the Trades Union Congress and the Labor Party. In this article the following figures are declared to represent wages and earnings:

Level of wage rates in 1926, above pre-war.....	33½ per cent.
Average earnings per manshift, June quarter, 1925.....	10s. 6.77d.
Average earnings per manshift, June quarter, 1914.....	6s. 5.64d.
Increase.....	60 per cent.
Cost-of-living increase.....	73 per cent.
Average time worked by mines, June quarter, 1925.....	4.92 hours.
Maximum earnings possible.....	52s.
Increase in maximum earnings over June, 1914.....	53 per cent.
Average actual weekly earnings, June quarter, 1925.....	48s. 6d.

That is to say, taking an average, if the miner worked for the whole time the mine was working, he could not have earned more than 53 per cent above his corresponding pre-war earnings.

The comment of the coal commission upon the miners' memorandum is most instructive:

In the first memorandum put before us by the miners' federation it was submitted that money earnings in the second quarter of 1925 were then about 53 per cent above their pre-war level, while the cost of living was about 73 per cent above pre-war, so that "real earnings were * * * far below pre-war." This particular comparison is based upon earnings over a period, rather than on wage rates, and is thus affected by the greater unemployment in 1925. If one uses instead, as in considering the proper level of a minimum wage one must use, the earnings per shift worked, there results in place of 53 per cent a figure of 63 per cent as representing the average increase in the wages per shift over all classes in mining between June, 1914, and the second quarter of 1925; even with this change direct comparison of the 63 per cent for wages and the 73 per cent for cost of living is for a number of reasons misleading. The most important of these reasons are (1) that the figure of 63 per cent is an over-all average, combining all the different classes of workpeople, and not taking into account changes in the proportions of different classes, and in particular the growth in numbers of the less skilled; and (2) that the basis periods taken for comparison in June or July, 1914, can not fairly be regarded as typical of pre-war conditions, either in respect of mining wages or of cost of living; when a minimum wage is under consideration it is clearly necessary to take as basis not the best or nearly the best of the pre-war years, but either an average of years or the year of lowest wages. Other points relating to the construction of the cost-of-living index and the supply of free or cheap houses or coal to a part of the mining population also call for consideration.

If, as the basis period before the war, the single year 1914 is taken, miners' wages have risen about 64 per cent to the last half of 1925 and the cost of living about 75 per cent. If, as the basis period before the war, the quinquennium 1909-1913 is taken, alike for miners' wages and for cost of living, the former have risen about 78 per cent and the latter 76 per cent. Having regard to the necessarily approximate character, both of the cost-of-living index itself and of the other calculations, no importance can be attached to the difference between these last two figures. All that can be said is that miners' wages, at the minimum percentage, as in the second half of 1925, and their cost of living have risen in about the same proportion, and that if there is any difference it is probably in favor of wages having risen slightly more.

WAGES DETERMINED BY TRADE BOARDS

The wages of 1,500,000 British workers are controlled by decisions of trade boards. Some authorities say that twice as many workers are represented, but the above figures are given by the Committee on Industry and Trade. There have been efforts to extend the application of the trade boards act until wages of some 5,000,000 workers are covered, but boards have not been set up in any new trades since November, 1921. At present there are about 60 trade boards, covering 35 trades; on January 1, 1925, there were 171,540 employing firms represented, as compared with 188,405 firms two years earlier and 180,641 in 1924.

In 1926 the Minister of Labour announced that reports of conditions in the drapery and allied trades, the meat distributive trades, the grocery trade, and the catering trade had not shown sweating conditions as prevailing and that statutory minimum rates of wages need not be put into operation through the appointment of a trade board for each branch of industry represented.

Although trade boards in their present operation are mainly a postwar creation, their origin reaches back some 40 years in the agitation against sweated labor. In 1909 this took expression in the trade boards act, empowering boards consisting of representatives of employers, workers, and an appointed group of outsiders to set up minimum rates of wages which thereby became enforceable at law. The system applied in New Zealand and Victoria guided the original action when the wages in four trades, which were regarded as underpaid, were set. By 1918 the Whitley Council idea had so spread that a new act was passed empowering boards to set wages not only in trades where pay was regarded as too low but also where there was no machinery for wage determination. Following this act 15 additional boards were set up in 1919, 34 in the next year, and 3 more in 1921, making a total of 63 boards covering 39 trades. At present there are 50 boards representing 35 trades.

The whole principle was given a searching reexamination by the Cave Committee in 1922, when formal recommendations were made to correct faulty operation of the boards, which, the committee found, were due to a tendency toward inelasticity, a disposition to look at wage problems from a general, national basis rather than a local basis, and, on the whole, a tendency to drift away from their original purpose which was to prevent the sweating of labor. A bill embodying the necessary reforms was introduced into Parliament but apparently the criticisms produced the desired results without the necessity of another act, as the bill never matured in action. At present the boards appear to be functioning smoothly; at any rate, their decisions as to wage changes are regularly reported, along with other changes, in the Labour Gazette, and while there is still some criticism there is at least no agitation for a broad revision.

A few more figures as to constitution and operation of the trade boards must suffice in the present necessarily rather summary treatment.

In 1923 there were 1,716 members of trade boards, consisting of 136 appointed members, 790 employers, and 790 workers; of the last mentioned 38 per cent were trade-union officials. Their hearings

and subsequent decisions are apparently conducted without friction; indeed, they are usually amicable and efficient. They arrive at their decisions along different lines, in some instances using the familiar cost-of-living scale to determine the desired wage rate. Once promulgated, their decision became compulsory, their enforcement being checked by 59 inspectors with headquarters in nine cities throughout Great Britain. During 1924, for example, 5,076 firms employing 88,706 workers were inspected, frequently as the result of complaints. There were 5,638 workers, employed by 1,546 firms, found to be underpaid; in addition, 1,210 firms had not posted notices, 1,307 did not keep proper records of wages, and 2,814 did not have adequate time records. In only 20 instances were legal proceedings taken, and the violations in these instances must have been rather flagrant, as convictions, with penalties, followed in every case.

The table in Appendix IV shows the rate of wages in trades covered by trade boards as of June, 1925. It still held, with minor variations, in midsummer, 1926.

The above analysis of trade boards indicates that, although they differ fundamentally in origin from other wage-setting plans in that they represent a State measure to prevent an offense (sweated labor), they have in time come to represent, for a special type of worker, the same function that has been performed by other wage schemes, namely, a means of navigating the course during the crucial years following 1920 when wages had first to be raised precipitately and then lowered gradually until some degree of stability was reached, without injustice to either employer or worker. Such relative stability has now been reached and trade boards are no longer conspicuously active. Changes in wages per hour will henceforth be made in farthings—that is, in fractions of former changes; also, the frequency of such changes is being reduced. The prime function of the boards, to prevent sweating, is also happily less urgent than may have once been the case. Indeed, it is quite possible to visualize a time when the boards may justify their existence through promotion of welfare work or of friendly relationships rather than by serving as a punitive group with power to prevent injustices.

CRITICISMS OF WAGE BOARDS

There are, of course, criticisms of this method of wage determination and they are mentioned herewith, for the sake of completeness of record. It should, however, be noted that these criticisms relate to a time during which all labor problems have been most difficult to administer. Wages went up so sharply in 1919 and 1920 and went down so rapidly in subsequent months that superhuman abilities would have been required to make the scale of ascent and decline one that would have met general approval and indorsement by opposing forces.

The three main points of criticism by the Cave Committee have already been referred to. The Committee on Industry and Trade, in its Survey of Industrial Relations, says that some minor trades have difficulty in making adjustments under trade board decisions. It mentions also the failure to make wage changes keep step with

rapid changes in industrial conditions. A more serious criticism, almost an indictment, is brought in a Labor Party pamphlet (*Industrial Negotiations and Agreements*) where the Cave report is interpreted as expressing a "policy of employers to invoke either State or joint machinery for fixing wages, at a time when labor is in a strong bargaining position, and abandon all such 'interference' at a time when labor is comparatively weak." The pamphlet admits a tendency among workers' members of trade boards to be composed of trade-union officials but says this offsets similar solidarity among employers' representatives. Dorothy Sells, in the *British Trade Boards System, 1923*, finds that the boards protect employers from strikes and unduly high wages in exceptionally good times, while in bad times they protect workers from drops that are too sharp and also provide them with a subsistence wage.

Just as due allowance must be made for some of the attacks upon trade boards, so must excessive approval, such as the statement that there has never been a strike among the trades so covered, be read in the light of the fact that one of the prime motives in establishing the boards was to afford adequate protection for trades which were of such relatively minor importance that the strike weapon could not be brought efficiently to bear. The weight of opinion may be summed up in the statement that trade boards represent an honest and reasonably effective method of determining wages that may not be brought under other forms of control.

TRADE BOARDS INCENTIVE TO EFFICIENCY

An important aspect of the service performed by trade boards is brought out clearly by Alan G. B. Fisher in *Some Problems of Wages and their Regulation in Great Britain since 1918*. He says: "It is the incentive to efficient management which the payment of a minimum wage gives that is the most striking and perhaps the most valuable feature of the work of the trade boards." He cites in evidence the testimony of an expert before the Cave Committee, as follows:

That the enforcement of these minimum rates has resulted in most employers acquiring a greater knowledge of the details of their business is beyond question, and may properly be attributed to one or more of the following factors:

- (a) Realization of the possibilities of increasing industrial efficiency by improved methods of working, thus maintaining rates of wages while reducing costs of production.
- (b) Sympathy with the acts and desire to carry out their provisions.
- (c) Knowledge that noncompliance might incur liability for proceedings.

While it is true to say that each advance in the minimum rates causes a large number of employers to look around with a view to improving the organization and equipment of their establishments, it is equally true that it has been a constant source of surprise to officers in the past to find how high a proportion of businesses are run on a "rule of thumb" principle * * *. It not infrequently happens in cases where the employer appears to lack the initiative or ability to determine for himself the defects in his factory organization that it is possible for the officer to do this for him.

This quotation naturally leads into very vital issues, such as the theory of a living or minimum wage and the increased ability to pay wages through elimination of waste. The former is adequately reviewed by Fisher, while the latter has been less fully investigated

in Great Britain than America. Both topics, however important to any broad analysis of wage principles, lie somewhat outside the narrow range of the present study which deals with British wages as they are rather than as they should be.

AGRICULTURAL WAGES

It was suggested at one time that wages of agricultural workers be placed under the control of an agricultural trade board. While this was not done, a system of control was provided that calls for consideration of agricultural wages at this point.

The whole subject is best presented in a report, appearing in 1926, of the Ministry of Agriculture and Fisheries, on the agricultural wages (regulation) act, 1924, during the period from the passing of the act (August 7, 1924) to September 30, 1925. The following analysis of the report is taken from the Labour Gazette for February, 1926:

The agricultural wages board is a central coordinating body for the whole of England and Wales; each of the 47 wages committees covers a county, or, in a few cases, two counties. Taking the board and the committees together, there are 48 chairmen, 98 "appointed" (i. e., impartial) members, 323 representatives of employers, and 323 representatives of workers, making a total of 792 in all. The board and the committees were all constituted simultaneously on October 18, 1924.

It is the duty of the agricultural wages committees to fix the minimum rates of wages for all workers in agriculture, including, if the committees think fit, the fixation of overtime rates. The order giving effect to the committees' decisions, however, is made by the central agricultural wages board, and not by the committees themselves. On the other hand, the duty of defining overtime employment and of defining the benefits or advantages (e. g., cottages, milk, potatoes, etc.), which may be reckoned as part payment of minimum rates of wages in lieu of payment in cash, rests entirely with the committees, and orders on these subjects are made by their authority alone.

In a section of the report dealing with the state of employment in agriculture it is stated that, so far as can be ascertained, it has not been the case that the operation of the minimum rates of wages has resulted in a diminution of the number of workers employed. The provision of the act allowing permits at wages below the general minimum rates to be granted in respect of disabled and infirm workers has enabled employers to retain the particular class of workers whose continued employment would otherwise probably have been seriously affected. Generally it appears that there has been no appreciable unemployment amongst regular farm hands during the year, and that such unemployment as has occurred in agriculture has been confined to casual workers at periods when there has not been sufficient seasonal work to employ all the labor available. It has been frequently reported that there is a shortage of really competent men to do the more skilled work, such as that of stockmen, carters, shepherds, hedgers, thatchers, etc. In many districts during the slack periods of farm work surplus labor has been absorbed by land-drainage and road-construction schemes. During the hay and corn harvests, and in some areas during potato lifting, farmers have not always found it easy to secure all the labor required, the number of casual workers available being scarcely sufficient for the demand in some parts of the country.

The first rates fixed for ordinary agricultural workers in 1918 by the earlier agricultural wages board constituted under the corn production act, 1917, varied from a minimum of 30s. a week to a maximum of 36s. 6d. In 30 out of 50 counties, however, the rate was either 30s. or 31s.

The highest rates, in 1921, fixed by the earlier agricultural wages board ranged from 46s. to 52s. In 34 out of 50 counties the rate was 46s.

The rates paid in 1924 (i. e., after the repeal of the corn production act, 1917, and before the coming into force of the agricultural wages (regulation) act, 1924) ranged from 25s. to 35s. The spread of the rates was much wider at this time, but more than half fell within the range from 27s. to 30s.

In the summer of 1925 the rates fixed under the agricultural wages (regulation) act, 1924, varied from 29s. to 37s. 6d., excluding north and east Lancashire, where it is understood that the majority of the regular workers are of the special class categories (stockmen, etc.). Three-quarters of the rates fell within the range from 30s. to 32s. 6d. On the average, therefore, rates were considerably above the corresponding rates in 1924 and had approximately returned to the level of 1918; all areas except seven or eight were within 2s. of the rates paid in 1918.

Speaking broadly, and with some exceptions, the lowest rates in all four periods were paid in the areas that are predominantly agricultural, particularly those in the eastern and southern counties, while the highest rates were paid in counties with a large urban, industrial, or mining population (Lancashire and Cheshire, Durham and Northumberland, Yorkshire, Middlesex and Surrey, Glamorgan and Monmouthshire).

COLLECTIVE AGREEMENTS

Thus far we have considered trades in which wages are determined by factors outside the industry, such as sliding scales that reflect either selling prices or the cost of living, and compulsory, legally binding decisions made by trade boards. There remain large and thoroughly representative groups of industries in which the wage level is determined within the industry—that is, by agreements between employers and employed.

The exact number of such agreements that are in force can not be accurately given, as the term, as here used, includes any formal or informal understanding between an individual employer or associated group with an individual worker or group of workers. In a great many instances, of course, the agreements are given very formal sanction and amount practically to a charter of rights of the respective sides. The only statistics available relate to this type, but even these data are not up to date. In 1910 it was estimated that there were 1,696 agreements in force representing 2,500,000 workers, but arbitration and conciliation boards were included in the number. Since 1919 the number has undoubtedly increased.

Agreements vary greatly in scope, as they may be nation-wide or may cover only a score of workers, though the tendency on the part of the workers has been toward national, or, in lieu of this, district agreements rather than those of narrower range. The present coal dispute has as one of its main causes the difference of opinion as to the breadth of the wages agreement, the mine owners asking that it be by districts, the miners insisting upon the national basis. When an industry is distinctly localized, as in the cotton trade, a district agreement is to all intents and purposes a national one.

This does not imply that wages and hours are uniform throughout Great Britain in an industry with such a broad agreement, although some consensus of opinion could be obtained in support of nation-wide "real" wages at a uniform level. Even here, however, the desire to arrive at equality is not asserted as a strongly impelling motive. Underneath such broad agreements there are all sorts of classifications, whether into rural and urban groups or into seven or eight grades of towns, or Scotland as against England, and so on. London seems to be regarded as deserving a classification to itself, on the living-cost basis, but the tendency is to cut down the number of grades of towns other than London for which special

terms must be provided in agreements. In coal mining the differentiation by district is not related to the cost of living but is guided by the quality of coal bringing better prices in some districts than in others.

National agreements are in force in building, civil service (and public services), mining, printing, transport, textiles, boots and shoes, metal (including engineering), and general labor.

Some of the separate types are mentioned below:

Building.—The Amalgamated Union of Building Trade Workers is a party to the National Wages and Conditions Council for the Building Trades. Wages vary according to districts and grades of towns within the districts, "A" representing the larger towns and "C" the smaller, London negotiating separately. The wages, from highest to lowest grade, show a spread of 6 pence per hour. The working week is 44 hours, but with the consent of the operative the hours may be 46½ in summer and 41½ in winter.

The agreement for the stabilization of wages and other conditions of employment expired in January, 1926, and plasterers and bricklayers took the occasion to seek revision of terms covering their hours of work and of enforced idleness. In coming to a decision negotiations were held between the Amalgamated Union of Building Trade Workers and the National Federation of Building Trade Employers. Increases of ½d. and 1d. per hour were announced in March, 1926, and in August a new agreement was signed stabilizing existing standard rates until August 1, 1927. Some of the rates by grades are as follows:

Grade of town or area	Craftsmen		Laborers	
	February, 1924	August, 1926	February, 1924	August, 1926
A2.....	s. d. 1 6½	s. d. 1 7	s. d. 1 2	s. d. 1 2½
B1.....	1 5	1 5½	1 0½	1 1¼
B2.....	1 4½	1 5	1 0½	1 1
B3.....	1 4	1 4½	1 0	1 0½
C.....	1 3½	1 4	0 11¼	1 0¼

Painters are in many towns rated at 1d. less than other craftsmen (bricklayers, masons, carpenters, slaters, plumbers, and plasterers) in the same grades. In February, 1926, plasterers in the London area negotiated to be paid 1s. 9½d. per hour, with an extra allowance of 2s. per day (1s. on Saturdays). This arrangement was effected between the London Master Plasterers' Association and the National Association of Plasterers, Granolithic, and Cement Workers, but was not recognized by the National Wages and Conditions Council for the Building Industry, thus indicating that the negotiation principle of wage determination leaves some scope to separate crafts to secure the best terms possible, even where national agreements are the rule.

Textiles.—Both cotton and wool operate on an adjustable percentage wage basis for which alterations are negotiated at intervals. As cotton is strongly localized in Lancashire, negotiations by that dis-

trict have the effect of national arrangements. In the woolen industry negotiations are usually on a national basis, through the National Wool and Allied Textile Industrial Council and an employers' council.

In July, 1924, the agreement regulating wages in the wool industry expired before a new agreement had been arranged, with the result that most of the operatives ceased work. The Minister of Labor appointed a court of investigation which reported in November, recommending that until after January 1, 1927, basis time rates be unchanged, and that piecework prices should be such as to enable the operative to earn at least 25 per cent over net-basis time rates. A simpler method of determining wages was also recommended.

Engineering and shipbuilding.—The negotiating machinery and the course of wages is thus described by Allin-Smith:

The wages of a considerable portion of the British laboring population are adjusted by the negotiations of engineering and shipbuilding bodies. The chief unions representing workmen in these general trades are the Amalgamated Engineering Union, the Engineering and Shipbuilding Trades Federation, and the United Society of Boilermakers and Shipbuilders for skilled and semiskilled, and the National Federation of General Workers for less skilled grades. On the employers' side are the Engineering and National Employers' Federation, the Dry Dock Proprietors and Ship Repairers' Association, and certain smaller interests.

Standard minimum time rates had been established in 1914 for important centers and skilled trades in these industries, and a tendency toward regulation and uniformity made headway during the war. The changes in wages from those minima for which a number of local agreements and awards were made until 1917 were effected by periodical conferences of the bodies already mentioned. In March of that year previous grants were combined to give a general minimum advance under a decision of the National Committee on Production, a war-time control body. Subsequently all war-wage grants or advances progressed on a national basis, amounting at the peak in June, 1920, to £2 or more each week; then including 13s. on basic rates, a war bonus of 26s. 6d., and a 12½ per cent addition upon gross earnings for all time workers. In addition, certain local adjustments leveled up wages in hitherto retarded outlying districts. The purpose in every case, of course, was to help working classes to meet a rising cost of living.

Since 1920 persistent negotiation, not without some friction, has resulted in agreement for complete or contemplated removal of all war bonuses, and has brought also a considerable reduction of the minimum wage increases gained since 1914.

The engineering trades include, among others, a majority of the craftsmen engaged in specialized phases of metal working. In the United States such of these as have reached the rank of machinists, engineers, electricians, or smiths can command a high daily-wage rate. In Great Britain, however, both the methods of apprenticeship and the large labor supply operate against the elevation of such wage earners above the general level and do not give workers of those skilled classes any exceptional dignity in the working-class community. The consequence is that, notwithstanding adequate apprenticeship or unusual skill, the weekly earnings of workers in British engineering trades do not average above those of any other group of craftsmen. All are, indeed, only a third or even a fourth as highly paid as similar workmen in the United States to-day.

Many of the job classifications in the shipbuilding and ship-repairing trades correspond with those in engineering generally. In fact, the shipyard workers of Great Britain spread their allegiance to both shipbuilding and engineering trade-unions and sometimes aggravate the incessant dispute as to whether industrial or craft trade-unions shall have control.

The wage changes in recognized average weekly full-time earnings, in important grades, have been as follows:

Classes of labor	Aug. 4, 1914	Mar. 31, 1923	Sept. 30, 1923	June 25, 1925	Per cent over 1914
Engineering:	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	
Fitters and turners.....	38 11	56 6	56 5	56 6	45
Patternmakers.....	42 1	60 9	60 10	60 11	45
Iron molders.....	41 8	59 2	59 1	60 0	44
Laborers.....	22 10	40 3	40 3	40 2	76
Shipbuilding:					
Shipwrights.....	41 4	48 11	48 7	55 7	35
Platers.....	40 4	47 10	47 7	54 7	35
Riveters.....	37 9	45 3	45 0	52 0	38
Ship joiners.....	40 0	50 9	50 5	57 9	44
Laborers.....	22 10	38 6	38 6	38 5	68

In the case of pieceworkers the general advance over the rates current in August, 1914, in the engineering industry amounts to 10 per cent on basic piece rate, plus a flat rate advance of 10s. a week. In the shipbuilding industry the general advance is 10 per cent, plus a flat rate advance of 7s. a week; in addition, part of the standard ship cycle special advances is still paid.

In January, 1926, the principle of national agreements in the engineering industry received a setback when representatives of 47 trade-unions broke off negotiations with representatives of the Engineering Employers Federation, after such negotiations for an increase in wages had continued since June, 1924. At that date the low rate of increase over pre-war, as illustrated above, prompted the national organization of workers to request an increase of 20s. per week. The customary procedure followed in the counter demands of employers' representatives for longer hours, involving at the same time a higher bonus. When the deadlock came, in January, 1926, the trade-unions seemed disposed to seek adjustments by districts, rather than by the national basis to which they are normally committed and which had, in fact, been adopted at their request. In reverting to such district adjustment there was the logical argument of the great scope and diversity of the engineering industry and the additional fact of widely differing conditions of business in separate branches and in separate parts of the country. Still, such differences had existed previously, when the national basis was adopted and employers were quite consistent in adhering to such a basis. Before making a broad advance in wages in all engineering, however, the employers desired to wait until the state of trade clearly warranted the nation-wide increase.

DEVIATION OF AGREEMENTS

There is no common agreement as to length of term of national and district wage agreements, as opinions differ on the reasons that should normally call for a new agreement, whether the economic necessity prevailing at an unforeseen time or the simple lapse of a definite term of months or years should prevail. Naturally, both parties oppose long terms for agreements arrived at during the height of boom or depression; again, seasonal trades affect agreements, the worker desiring an understanding that will carry beyond

the busy season while it is in the employers' interest to have an agreement lapse at the same time as the heavy season lapses. This is especially true in agricultural employment. The coal agreements have usually expired at a time when least hardship would be felt by the public in its need of household coal or by industries with heavy seasonal needs. Whether the dates were deliberately so chosen is not clear.

No hard and fast rule can be formulated, but the following classification is approximately correct:

1. Periods longer than one year: Mining, usually three to five years; boot and shoe, three years; cotton, vary, beamers, twistlers, drawers, two years, card and blowing rooms, five years; iron and steel, terminate when work changes.
2. One year or less: Textiles, woolen, usually one year; agriculture, many terminate with harvest; furnishing, three to six months.
3. Indefinite: Railways, building, transport, engineering, and other great trades show no uniform tendency as to length of term of agreements.

MISCELLANEOUS METHODS

Through permutations and combinations of the above methods of determining wages, in one industry or another, many variations are in practice, with the result so often stressed in this study that no uniformity whatsoever prevails and no such thing as an average wage of the British laborer exists. Not only are there many ways of arriving at a basic wage, but a great variety of supplementary payments is practiced, resulting in a baffling distinction between weekly wages and weekly earnings.

In order to illustrate these miscellaneous methods of setting wages, two instances, one simple and one complex, are taken from the systems employed at Government establishments.

1. *The Admiralty premium bonus.*—Under this scheme a given number of hours is assigned to a particular job to be done; for example, painting of oil tanks, trench digging, pipe laying, and so on. The workers by extra efforts complete the job in a shorter time and receive pay per hour worked plus a premium bonus amounting to the hours worked multiplied by the number of hours less than those assigned, the product divided by 100. Thus if 100 hours are assigned and the work is done in 85, the bonus is

$$\frac{85 \times 15}{100} = \frac{1,275}{100} = 12\frac{3}{4} \text{ hours.}$$

In this way the employers pay for only 97 $\frac{3}{4}$ hours and the workers receive a bonus that runs to a maximum of 25 per cent. In some instances 3,500 man-hours may be assigned to a job, as when several coats of paint are applied. Here each of a considerable number of employees may make a considerable bonus, and it is to the interest of each worker to stimulate the others.

2. *The home dockyards piecework scheme.*—In this scheme a rather intricate formula is applied to arrive at fair earnings. Where T represents time pay for time worked and J the standard time pay assigned to a job: Total earnings = $T \left(2.07 - \frac{T}{J} \right)$.

This is called the "equalizing formula."

Such methods err on the side of accuracy, in view of the more important end to be served by any wage scheme, that it must be clearly demonstrable to the men as equitable. Any formula whose basis is not self-explanatory comes to be suspected by workers, especially in the lower grades, as containing a catch. The cost-of-living index is the formula most generally applied and is well enough understood in principle, and yet it is the subject of almost constant controversy which makes a revision essential if it is to be of much further use.

TIME RATES AND PIECE RATES

The preceding statements of wage payments have related almost exclusively to time rates at so much per hour or per week, rather than to piecework or any other form of payment by results, for the double reason that time earnings may be ascertained more nearly exactly and that time rates are more commonly employed.

The Committee on Industry and Trade, in its frequently quoted Survey of Industrial Relations, has made the most recent inquiry into the relative importance of the two methods of payment. It starts with the wage census of 1906, which summed up the division by trades as follows:

Industries	Proportion of—		Industries	Proportion of—	
	Time workers	Piece-workers		Time workers	Piece-workers
	Per cent	Per cent		Per cent	Per cent
Building.....	95	5	Pottery, brick, glass, chemicals, etc.....	65	35
Engineering, shipbuilding, and other metal.....	67	33	Food, drink, tobacco.....	83	17
Textiles.....	49	51	Public utility services.....	96	4
Clothing.....	63	37	Mining and quarrying.....	62	38
Railways.....	98	2	Other (excluding agriculture).....	81	19
Paper, printing, etc.....	79	21			

About three-fourths of employees represented in the above table were on time rates and one-fourth on piece rates. Corrections for omissions and weighting for relative importance permit this to be slightly revised, so that in 1906 the more probable division of labor was 72 to 28 in favor of time rates. The value of these figures is somewhat lessened by the fact that unskilled labor and supernumeraries of all sorts are practically entirely on a time basis, so that the ratio among skilled labor is apt to be obscured.

Since 1906 the share of piecework has certainly increased, though not along an even scale by industries. The war-time practice drew many workers over to a plan of payment by results, and some of these have not gone back to the former basis.

The foremost method of payment is a stipulated sum for a stipulated job, with a guaranty, hardly necessary, that this sum shall not be lower than time rates on an equivalent basis. It is quite common to find a lump sum paid for the job, which sum the foreman distributes among a group of pieceworkers. Adjustments of piece rates are made in general along the same lines as those for time rates.

The following particulars by industries are abstracted from the report of the Committee on Industry and Trade (quoting 1906 figures and any subsequent changes):

Coal mining.—Ratio about 60 per cent time and 40 per cent pieceworkers. Hewers, the higher skilled, are as a rule on the piece basis.

Iron and steel.—Pig-iron workers, adult males, about 89 per cent time; smelting and puddling, adult males, about 70 per cent time.

Engineering.—Per cent of workers on time and piecework are shown in the following table:

	Time	Piece	Bonus		Time	Piece	Bonus
	Per cent	Per cent	Per cent		Per cent	Per cent	Per cent
Molders.....	76	24	—	General laborers.....	91	8	1
Smiths, strikers.....	64	36	—	Boiler platers.....	32	48	—
Turners.....	61	29	10	Riveters, calkers.....	63	37	—
Fitters, erectors, millwrights.....	70	22	8	Holders-up.....	57	43	—
Machinemen.....	53	38	9	Platers' helpers.....	50	50	—

War-time arrangements have probably left their effect in a certain increase in the ratio of pieceworkers.

Shipbuilding.—Workers in different lines were, in 1906, thus divided:

	Time	Piece		Time	Piece
	Per cent	Per cent		Per cent	Per cent
Platers.....	21	79	Holders-up.....	14	86
Platers' helpers.....	38	62	Drillers, hole cutters.....	27	73
Riveters.....	21	79	Machinemen.....	64	36

Of all workers, 66 per cent were on time; the above, with whom piecework predominated, represented specialists.

Electrical manufacturing.—There were 73 per cent of adult males on time rates, piecework being done by accumulator makers, lamp makers, machinemen, and assemblers.

Cotton industry.—Preparing and carding are done on time, and mechanics, maintenance men, general laborers, and assistants are on time rates. Specialists, such as spinners and weavers, are almost entirely on piece rates agreed upon by negotiation between employers' and workers' organizations. The rates are highly specialized, most intricate, and quite beyond the layman's power to understand.

The committee report shows much the same conditions to prevail in other industries; that is, the majority of workers are on a time basis but among the higher grades of skilled labor piece rates prevail, with a tendency to become somewhat more general than in 1906.

HOURS OF WORK AND OVERTIME

The number of hours' work represented by the pay, per day or per week, is a topic that has come to occupy more attention than the rate of wages. This has been because the solution of the coal problem has in many minds seemed to lie in a longer working-day as an alternative to lower wages. It happens that the coal industry

is the only one in which by the act of 1919 the number of hours is regulated by law, as the factory and workshop act, 1901, which limits the permissible weekly hours of work by women and young persons, belongs in a different category. For this reason the coal working-time restriction to seven hours per day is clung to with grim determination by labor representatives as an established principle. The act of 1919 changed the coal mines regulation act of 1908, which called for eight hours per day, so that the Government, in introducing a bill, in June, 1926, to make eight hours permissible, was really reestablishing the status quo. Furthermore, on a six-day week basis the working hours in the coal industry were being brought into line with 90 per cent of British industry, where 48 hours per week constitute the normal working period on which overtime pay is based.

Efforts have been made in the last three Parliaments to pass legislation making 48 hours per week the normal—legal—working time, but in each instance the effort has failed, mainly on the ground, as noted above, that 48 hours already prevails in nine-tenths of British industry, and that even an eight-hour law would have to be elastic in respect of certain forms of work. The working-time problem is apparently not to be solved by legislation.

Negotiation and agreement seems to represent a more practical and elastic manner of attacking the problem. For this reason the British Government early in 1926 called a conference to study the question in its international aspect, mainly with reference to the Washington hours convention. The conference did not attack the question of a legislated number of hours, but made important interpretations with respect to different kinds of labor. Further conferences of this sort will undoubtedly be desirable from time to time, as most questions arise, but on the whole the hours of labor may be regarded as fairly well stabilized and standardized.

The situation has undoubtedly improved since the war, mainly through reductions arranged in 1919 and 1920, affecting 7,000,000 workers and bringing the weekly schedule down from 52 and 56 hours to an almost uniform 48 hours. This reduction was in many cases accompanied by an upward adjustment of piece rates. The greatest reductions have taken place in industries which were previously working two shifts of 12 hours, and which under the new system work three shifts of eight hours. In almost all cases the reductions involved maintenance of weekly wages at their former figure.

This normal working week of 48 hours enables British industry to produce the amount of goods for which there is a demand in normal times. But even under normal conditions there are certain trades with considerable part-time employment, while others require work in excess of 48 hours, and thus have to pay overtime rates, adding to the cost of the product. When business conditions become abnormal, accordingly the practically standardized number of working hours results, fairly generally throughout industry, in a heavy ratio of unemployment if times are depressed and in a heavy ratio in the wage cost of the product if times are exceedingly good.

The earnest effort to reduce the ill effects of unemployment in the one instance and the great importance in the other instance of keep-

ing costs down to a point where British trade may compete with foreign industry, represent two points of a dilemma with which British employers are confronted in adjusting manufacture to the above inflexibility in the hour basis. There is no uniformity in the attack upon the problem. Just as it may not be solved by easy adjustment of the number of hours per week, so also is it practically impossible to adjust it by diverting labor to trades and districts where it may be in demand. British labor is decidedly immobile, while the housing situation also stands in the way of a shift of the labor front. A roundabout mode of attack on the problem is represented by efforts to arrive at international understandings to control competition and by local British enactments either to take up the slack in labor or to protect industries by tariffs, but none of these policies has progressed so far as really to solve the problems.

Overtime rates are not standardized either as to amount or method of payment, although time workers usually receive about time and a quarter during the first two hours and time and a half thereafter. Some trades pay normal rates for the initial overtime and others pay double for the subsequent excess. Pieceworkers are on a similarly broad basis, the addition representing a specified amount per hour or a fixed proportion of time rates, which is added to the pieceworkers' earnings. Furthermore, there are special arrangements, by trades, for Saturday afternoon and Sunday shifts, for day or night overtime and for districts and classes of workers. Some industries restrict the amount of overtime which may be worked; others do not. In coal no overtime at all may be required, as the law definitely limits the day to seven hours.

In the table shown in Appendix V the hours per week and the overtime arrangements in leading industries are selected from a more detailed table presented in the report of the Committee on Industry and Trade.

PAYMENT OF WAGES FOR HOLIDAYS

Separate agreements are in force throughout British industry governing the principle of payment of wages while employees are on vacation. The character of these agreements has the widest possible range; in addition, there are a great variety of arrangements or understandings which have not been reduced to a formal agreement. There is no single policy of the laborer or employer toward the matter of payment during holidays. About 1,500,000 workers come under the scope of agreements, but it would be impossible to say how many more enjoy equal advantages without written confirmation that converts a privilege into a right.

As a general thing the agreements embody the following features:

- (a) A definite length of vacation is stated.
- (b) A qualifying term of preliminary service must be met.
- (c) Statutory holidays are not counted as part of the leave period.
- (d) Time workers are paid on a weekly average earning basis and pieceworkers have an average computed on the basis of a preceding period of varying length.
- (e) Few agreements allowing withdrawal of the holiday privilege as a penalty to be imposed because of some unsatisfactory performance on the worker's part.

(f) Very few of the agreements call for contributory payments by the worker toward wages during holidays.

(g) In some instances the seasonal character of a trade determines the holiday season at a time of inactivity. That is, the holiday is really a lay-off period whereby the availability of labor upon business resumption is assured by continuance of wages. In nonseasonal trades, leave periods are distributed so as to avoid excess of absences at any one time.

The following table lists some of the industries or occupations in which agreements exist providing for the granting of holidays with pay. Except where otherwise stated, usual public holidays are not included; these are, of course, granted and payment of wages is uninterrupted.

Industries	Qualifying period	Annual holiday	Industries	Qualifying period	Annual holiday
GENERAL AGREEMENTS			DISTRICT AGREEMENTS		
Paint, color, and varnish.....	Months 6	1 day.	Mining and quarrying, according to district and grade.	Months 12	48 hours to 14 days.
Heavy chemicals.....	9	3 days.			
Cement.....	12	5 days.			
Printing inks.....	12	1 week.			
Flour milling.....	12	Do.			
Printing, bookbinding.....	6	Do.	Electricity supply according to district:	12	14 days.
Railway workers, according to grade.....	12	Do.	Shift workers.....		
			Day workers.....	12	3 to 14 days.

¹ Usually.

Many other trades and industries could be quoted to show that in this, as in nearly all British wage quotations, there is no uniform practice. A general summary would show three days holiday after a six months' qualifying period and a week after one year's employment. In comment upon the question the Labour Gazette for March, 1925, from which the above particulars are taken, explains that in many instances a proportion of the employees are required to work on holidays, sometimes receiving extra pay. In the boot and shoe industry payment is made from a fund to which employers and workers contribute.

Before concluding this topic it is important to comment upon the bearing of unemployment and absenteeism upon the situation. It is quite likely that workers who have difficulty in securing a steady job are not over eager to claim their leave; the period of continuous employment necessary for qualification itself serves to debar many from leave with pay.

Absenteeism is in one sense a voluntary holiday taken by the worker. For example, the horse-racing season in different districts, running a week or two, leads to absenteeism to such an extent in some instances that individual plants can not "carry on." In a similar classification belongs the absenteeism among pieceworkers who may take advantage of a slack season to take a day or two off until work accumulates. Thus riveters in the shipbuilding industry can keep ahead of their job and are normally not needed on hand all the time. Such workers are not vitally interested in holiday arrangements, and the result is that the topic is not one of very great importance in current British labor discussions.

TRADE DISPUTES

The wholly abnormal conditions represented by the war and by the postwar boom and depression have naturally been reflected in an equally abnormal number of trade disputes. For the 25 years preceding 1918 the annual average of such disputes was 665; for the eight years beginning with 1918 the annual average rose to 926. Again, in only seven years in the former period of 25 years was there an aggregate of 10,000,000 working days during which there were disputes; since the war the annual average has been 25,000,000 working days, the highest being represented by the year of the coal strike (1921), while the most nearly peaceful postwar year was 1925. Each of the five years ending with 1925 represented an improvement in this respect over its predecessor and it seemed that pre-war relative stability was in a fair way to be restored, only to have such anticipations blighted by the serious labor difficulties that cropped up in 1926. The figures by years, omitting the war period, have been as follows:

Year	Number of disputes beginning in year	Number of workpeople involved in disputes beginning in year			Aggregate duration in working-days of disputes in progress in year
		Directly	Indirectly	Total	
1894-1903, average.....	687	155,400	61,400	216,800	5,984,000
1904-1913, average.....	626	370,700	101,800	472,500	9,320,000
1918.....	1,165	923,000	193,000	1,116,000	5,880,000
1919.....	1,322	2,401,000	190,000	2,591,000	34,970,000
1920.....	1,607	1,779,000	153,000	1,932,000	26,570,000
1921.....	763	1,770,000	31,000	1,801,000	85,870,000
1922.....	576	512,000	40,000	552,000	19,850,000
1923.....	628	343,000	62,000	405,000	10,670,000
1924.....	710	558,000	55,000	613,000	8,420,000
1925.....	604	402,000	40,000	442,000	7,970,000

The figures in the last column are obtained by multiplying the number of workpeople by the number of working-days, certain minor allowances being made to arrive at a comparable result.

CAUSES OF DISPUTES

By far the larger number of these disputes—that is, from two-thirds to three-fourths of them—are caused by controversies as to wages. The Committee on Industry and Trade has published a summary of causes, as prepared by the Ministry of Labor. Taking the numbers of workpeople engaged in such disputes from 1910 to 1924, the percentages of causes that led to the disputes were: Wages, 69; hours of labor, 7; employment of particular classes of persons, 8; other working arrangements, rules, and discipline, 6; trade unionism, 8; miscellaneous, 2. In 1924 and 1925 wages were at the bottom of 75.6 and 68.6 per cent of all the disputes.

SETTLEMENTS

A dispute may result in a victory for the worker or for the employer or it may be compromised. As there is a very common in-

clination among people who discuss labor problems to dogmatize in this matter, it seems desirable to quote a table showing just what the proportions of the three possibilities have been in recent years, again omitting war years as unrepresentative.

Year	Results in favor of—		Com- promise	Total	Year	Results in favor of—		Com- promise	Total
	Work- ers	Em- ployers				Work- ers	Em- ployers		
1910.....	134	189	198	521	1923.....	187	183	258	628
1911.....	221	273	378	872	1924.....	163	235	312	710
1912.....	230	248	356	834	1925.....	154	183	252	589
1913.....	425	371	663	1,459					
1919.....	345	306	701	1,352	Average.....	228	276	397	-----
1920.....	390	507	710	1,607					
1921.....	152	315	296	763	Percentage.....	26	30	44	-----
1922.....	111	222	243	576					

The larger total percentage in favor of employers over laborers arises out of the decisions during the deflation period, 1920-1922, when wages were showing their usual downward lag behind prices and employers had an unusually strong case. The surprising feature is the relatively small percentage of compromises, refuting the off-hand assertions of those who hold that nearly all settlements are in the nature of a compromise.

METHODS OF SETTLEMENT

Further statistics from the same source show that 72 per cent of settlements are arrived at through direct negotiation between employers and workers, 8 per cent by conciliation, 6 per cent by arbitration, 8 per cent by abandonment of the strike on the owners' terms, and the remaining 6 per cent "otherwise." In other words, 640 out of 893 disputes between 1910 and 1924 were brought to an end by direct negotiations between the employers and workers or their representatives. These settlements may have involved compromises, which is not the same thing, technically, as the settlement by arbitration, referred to above as having been invoked in only 6 per cent of the disputes.

DISPUTES IN 1924 AND 1925

As everyone is well aware, coal has been the chief cause of contention in Great Britain during the past three years. In 1924 it gave rise to 190 disputes and caused lay-offs totaling 1,563,000 working-days; in 1925 there were fewer disputes, 164, but they were far more serious, as the loss in working-days was 3,453,000; returns for 1926 will show an immense increase in the figures, even though the present coal strike may be recorded as only one dispute. Even this blot on the record will not show the full degree to which coal is responsible, as the abortive general strike in the first 10 days of May, 1926, was directly due to the desire of the Trades Union Congress to back up the demands of the miners.

Other very serious obstacles to industrial welfare in the past two years have been the builders' strike in 1924 and that in the textile

industry in 1925. The details are shown in the Ministry of Labour Gazette for June, 1926, as follows:

Industry	1924			1925		
	Disputes	Workers	Working-day duration	Disputes	Workers	Working-day duration
Coal.....	190	136,600	1,563,000	164	130,000	3,453,000
Other mining.....	14	3,500	65,000	12	86,000	301,000
Engineering.....	33	11,600	112,000	18	5,400	37,000
Shipbuilding.....	40	34,500	597,000	27	7,000	49,000
Other metal.....	63	25,400	691,000	48	11,600	97,000
Textile.....	50	11,400	200,000	59	172,100	3,173,000
Building.....	58	113,600	3,134,000	54	5,400	79,000
Transport.....	78	244,400	1,539,000	46	28,800	68,000
Other.....	184	79,200	521,000	176	75,400	709,000
Total.....	710	616,100	8,424,000	604	445,300	7,966,000

The great wool textile dispute of last year was hardly settled, as the final decision was to maintain the existing rate of wages until January, 1927, at which date the issue will presumably be joined again. The coal dispute was in reality a group of several strikes, by reason of the organization of the industry by districts which are largely autonomous. A general coal strike was only averted at the last minute, it will be recalled, when the subsidy over nine months served to defer the entry until the books for 1926 were opened. On May 1, nine months to a day, the deferred strike took place.

CAUSES

Wages again led the causes in defense of which a strike was the last resort, 75.6 per cent of the 1924 misunderstandings and 68.6 per cent in 1925 having their origin in questions of pay. The length of the working day, at present the center of the coal quarrel, was a practically negligible factor in the past two years.

DURATION

The following table from the same issue of the Labour Gazette gives excellent witness of the futility of a large proportion of the disputes. Over one-half of them lasted less than one week, suggesting that the grievance could hardly have been a very deep-seated one, or at any rate one which might have been adjusted without resort to the loss and confusion which must accompany every dispute, however brief.

Groups	Num-ber of dis-putes	Workers involved	Aggregate working days	Groups	Num-ber of dis-putes	Workers involved	Aggregate working days
DURATION OF DISPUTE				NUMBER OF EMPLOYEES INVOLVED			
Under 1 week.....	309	126,400	303,000	Under 100 workers....	286	11,000	179,000
1 to 2 weeks.....	111	44,200	283,000	100 to 500 workers....	197	43,700	518,000
2 to 4 weeks.....	74	179,200	3,301,000	500 to 1,000 workers....	58	39,900	303,000
4 to 8 weeks.....	56	38,900	820,000	1,000 to 5,000 workers..	51	89,900	2,170,000
8 weeks and over.....	54	53,100	4,212,000	5,000 workers and over.....	12	258,200	5,749,000

Thus, 80 per cent of the disputes concerned less than 500 workers each, but an immense amount of machinery, interruption of goodwill, and, above all, interruption of production must have resulted; and in the present economic position of Great Britain continuous production is vital.

PROFIT SHARING

Close observers of wage conditions are aware that the problem of wages is not one of equal intensity over a long period but rather one of varying degrees of urgency and acuteness which reaches climaxes at periods which are as a rule unpredictable but which at other times, as in the case of the postwar boom and depression, may be clearly foreseen. The greater number of disputes, strikes, and lockouts which mark these climaxes may be their immediate result, but their settlement does not involve a simple return to the status quo, from which period of relative freedom from disturbance the employers and workers gradually work toward another climax. Instead, there is usually an aftermath, a wake, that follows an industrial disturbance, when the minds of all those interested are disposed to consider schemes of various sorts that might serve to prevent, or at least defer, a repetition of such costly interruptions to normal production.

Among the schemes of this nature which crop up at fairly frequent intervals are those which relate to cooperation, copartnership, and profit sharing. They are designed either to secure a greater return for the worker in exchange for his labor, or to enable him to secure a greater value for the money which is the fruit of his labor. The cooperative movement belongs in the latter category, as it seeks to provide more goods for the same money, or the same goods for less money, through cooperative marketing. This movement, so long and so ably practiced in Great Britain, is not logically a part of the present study of wages, as it deals with the more economic use of the wages as obtained and not with the effort to supplement these wages with additional sums which, though essentially a return on labor, are called by another name. In this class belong copartnership schemes, though the term "cooperation" is also often applied to them in spite of the fact that that term has technically a somewhat different application.

Labor copartnership or profit-sharing schemes have come in waves in Great Britain. Sometimes they endure and have a valuable result in adding to the worker's return for labor expended and a more valuable result in improving the will of the worker to keep industry going. But just as frequently they enjoy a brief day and then disappear for one reason or another. Altogether there have been a surprisingly large number of schemes. In 50 years some 500 have got under way, of which about one-half have come to an end, leaving nearly 250 which are still recognized as in force. The Committee on Industry and Trade, in an article compiled by the Ministry of Labor (which printed an exhaustive study of the subject in 1920), gives the following chronology of profit-sharing schemes:

Date	Schemes started	Terminated	Operative	Date	Schemes started	Terminated	Operative
Before 1881.....	35	30	5	1920.....	50	9	41
1881-1890.....	79	67	12	1921.....	13	1	12
1891-1900.....	77	63	14	1922.....	7	-----	7
1901-1905.....	26	19	7	1923.....	8	-----	8
1906-1910.....	55	22	33	1924.....	6	-----	6
1911-1915.....	64	22	42				
1916-1918.....	22	6	16	Total.....	493	251	242
1919.....	51	12	39				

In recent years the renewal of interest is identified, like every other economic phenomenon, with the boom and depression years 1919-20, when exactly 101 schemes sprang into being. Since the latter date interest waned, but the present year has witnessed, unless the writer is mistaken, a fresh revival of interest.

By "profit sharing," as here used, is meant that which gives to workers a sum over and above wages, the amount being guided by the degree of profit; that is, arrangements whereby wages fluctuate with selling prices mean more pay when prices are high, which is not at all the same thing as when profits are high.

Industries now employing some form of profit sharing employ 340,000 workers, of whom 172,000 are eligible. Their range is rather restricted, as three-fourths of them are to be found in industries in the following order: Gas, water, and electricity supply industries, merchants and warehousemen, engineering and shipbuilding, textiles, food and drink, and book publishing. The gas industry leads because of the semipublic character, assured earnings, and system of dividend payments.

The different plans of distribution of funds under the profit-sharing and bonus schemes and the number of schemes using each plan are shown in the following:

	Schemes
Paid in cash or to savings account.....	111
Retained in superannuation account.....	9
Invested in the company's capital.....	16
Invested until certain total acquired, after which part paid, part retained.....	17
Combination of above.....	32

RESULTS OF SCHEMES

The Ministry of Labour summary of the principle shows that companies practicing such schemes paid bonuses that represented an addition of anywhere from 3.6 per cent to 6.7 per cent of the workers' earnings; the average over 12 years has been slightly above 5 per cent.

Experts are inclined to take a very skeptical attitude as to the value of such schemes. They mention the small proportion of workers represented, their apathy to any broader aspect of the employer-worker relationship as implied by such payments, which become a matter of course when they are continuous but a cause of dissatisfaction as soon as they are interrupted. It is rare to find that it results in increased zeal on the part of the worker; there is doubt

whether it has collateral effects in increasing the general good will within a plant.

It is significant that trade-unions have consistently opposed the idea, even going so far as to precipitate a strike to force abandonment of the plan. Resolutions against profit sharing are passed at annual sessions of the Trades Union Congress. In 1913 it was voted "that this congress believes that capitalist attempts to introduce forms of copartnership are designed to mislead the workers."

In spite of these facts there is still a large degree of support for the general principle. There is a Labour Copartnership Association which in June, 1926, held its third triennial copartnership congress, with Lord Cecil in the chair. At this meeting the well-known advocates spoke enthusiastically of plans to further the principle, and propaganda secured abundant newspaper space in broadcasting the benefits to be derived. One of the leading exponents, Seeborn Rowntree, of the great chocolate company at York, England, outlined the following eight requirements which his lengthy study had revealed as essential to the success of such plans:

1. The capital basis must really represent assets.
2. Labor's proportion must be fixed and unchangeable.
3. Labor must have access to accurate accounts.
4. Their share must be legal and not dependent on bounty.
5. Mobility or freedom of workers must be unrestricted.
6. Wages must not be less than trade-union rates.
7. No restrictions against workers joining unions.
8. Strikes must not be penalized.

It is not the province of this report to uphold or to attack any principle of British wage payments and their administration; rather, the purpose is merely to assess them in their relative degree of importance as controlling factors in the British wage position. From this standpoint it is impossible to regard profit-sharing schemes as having a great weight in deciding the present or the future wage position. There will undoubtedly always be a certain advocacy of the principle, but it will probably continue to be manifested in restricted areas and under special circumstances that make any general adoption unlikely. As a lawyer might summarize the situation, profit-sharing schemes are not of the essence of the British wage situation.

PROFIT SHARING IN 1925

The Ministry of Labour summarizes 1925 conditions in the June issue of the Labour Gazette. It reports 252 schemes practiced by 246 firms, affecting 190,700 employees among some 400,000 employed by these firms. The average bonus paid per head was about \$50 in 1925, representing an addition of 5.3 per cent to the workers' earnings. The eight new schemes introduced during the year included the following:

Coal mining.—Common shares sold on favorable terms.

Chemicals.—Preferred and common shares sold on favorable terms.

Banking.—Shares issued to staffs.

Shipping.—Employees' deposits bear 5 per cent, plus additional rate varying with dividends.

Cotton.—One-third of a determined balance set aside for workers, in proportion to earnings. Of this, one-half cash and one-half certificates.

Builders' merchants.—Fixed percentage of profits paid to employees.

During the year London electricity companies were authorized by two acts of Parliament to frame profit-sharing schemes. During the same period five schemes were abandoned, two through amalgamations of the paying companies, one through apathy on the part of employees, one by reason of other ways to pay higher wages, and the fifth because of the employer's unwillingness to continue.

UNEMPLOYMENT

Unemployment is a separate topic that really has no place in a wage study of this restricted type, but, nevertheless, some reference must be included to one phase of the British employment situation, in order to correct a very common misconception as to the part played by payments in lieu of wages when workers are unemployed. No single aspect of British industrial life has been more voluminously, and hardly any aspect more inaccurately, discussed than the British unemployment relief payments commonly stigmatized as the "dole." To the uninformed, depending entirely upon prejudicial sources for their information, these payments represent a flat-rate payment by the State to workers who are commonly tempted to refuse a job because they can receive as much, or even more, by drawing a dole as long as they choose to absent themselves from work. It is worth while, if only in the interest of accuracy, to summarize the operation of the British unemployment insurance acts.

Persons ineligible for pensions.—Workers in agriculture, horticulture, forestry; domestic servants (including chauffeurs), waitresses, caretakers, charwomen, club, school, or hospital attendants; armed forces; police; employees in permanent jobs with railways or public utilities.

Persons eligible for pensions—qualifications.—An applicant must prove that not less than 30 contributions have been paid in respect of him; he must prove continuous unemployment after making application; he must be capable of doing work if employment were offering; he must be genuinely seeking and unable to obtain employment; he may be required to attend a course of instruction, benefit being refused upon nonattendance.

Disqualification.—Unemployment resulting from any overt act on the claimant's part, whereby he is in part responsible for his lack of work, does not entitle him to receipt of benefit.

Payments.—A claimant receives one week's relief for each six weekly contributions which he has made to the fund; the maximum is 26 weeks of benefit in one year; extended benefit is paid under carefully controlled conditions.

Amount of benefit—weekly rates.—Men, 18s.; boys, 16 to 18 years, 7s. 6d.; women, 15s.; girls, 16 to 18 years, 6s. 6d.

Contributions.—The money is not all contributed by the State, but by State, employer, and employee, on the following basis:

	By employee	By employer	By the State	
			Ordinary rates	Exempt persons
Men.....	d. 7	d. 8	d. 8	d. 2½
Women.....	6	7	6	2½
Boys under 18.....	3½	4	4½	1½
Girls under 18.....	3	3½	4½	1½

NOTE.—After Jan. 1, 1928, the State share will be reduced.

Very heavy sums have been paid out to mitigate the hardship of unemployment but the fund from which payments are made was built up in part of the workers' wages while they were employed; second, the sums are not large enough to induce any large spirit of idleness among potential workers; and third, the duration of the benefits and the safeguards thrown around them are so carefully administered that serious violation of their principle can not possibly be of long duration.

MEMBERSHIP IN LABOR UNIONS

While the number of labor unions has decreased the present century, membership has heavily increased. The explanation lies in the amalgamation of closely related unions. The Ministry of Labour has prepared an interesting comparison of conditions in 1897 and 1924. A table showing this comparison is in Appendix VI.

OCCUPATIONS IN ENGLAND AND WALES

At various places in the present report the statement is made that British labor is particularly immobile, by which it is meant that through one circumstance or another, by no means a circumstance in every instance over which the worker has control, the worker may not transfer easily out of an unremunerative occupation into one which pays better wages. It is not merely that he is not trained to do the other job; there has been a large increase since the war in the ratio of unskilled labor and their pay has risen higher in proportion than that of skilled labor. It is, therefore, conceivable that an employer might take a worker from a different field with confidence in his ability to do the job as well as the average employee in the new line. The difficulty lies rather with practical questions such as housing accommodations in the well-paying region to which the worker might migrate. Further, there is also the economic principle that a better-paying trade would no longer offer higher wages, once a larger supply of men had flocked to the more remunerative field.

Over several decades, however, it is possible to detect a certain degree of migration of labor, or at any rate trades which are employing increasing numbers and others which are losing ground. In this long-run trek of workers undoubtedly wages play a rather im-

portant part. The following statement from the census of 1921 for England and Wales as compared with earlier ones shows interesting contrasts.

The population of England and Wales in 1921 (10 years and over) was 31,046,000, of whom 17,178,000 were classified as occupied. The following summary of employment by industry at 10-year intervals of the twentieth century shows some interesting changes.

[In thousands]

Industries	1901	1911	1921	Industries	1901	1911	1921
EMPLOYING DECREASING NUMBERS				EMPLOYING INCREASING NUMBERS			
Agriculture.....	1,198	1,230	1,124	Coal mining.....	644	971	1,133
Stone quarries.....	56	49	36	Chemicals, paints.....	29	61	77
Textile goods, clothing.....	1,025	1,050	815	Metals, machines, imple- ments.....	1,232	1,516	2,126
Boots and shoes.....	229	218	198	Textile manufacture.....	995	1,174	1,142
Building, contracting.....	1,052	861	768	Food manufacture.....	217	337	378
Personal service.....		2,452	2,025	Paper.....	220	285	340
STABLE OCCUPATIONS				Scientific instruments.....	10	20	29
Bricks, pottery.....	126	136	129	Gas, water, electricity.....	56	109	163
Skins, leather.....	79	87	80	Railways.....		455	549
Woodworking.....	230	242	228	Government employ.....		414	647
				Local government.....		489	689

BROADER ASPECTS OF THE SUBJECT

Because of the perplexed state of British labor during the days of severe deflation various emergency palliatives were devised to moderate the effects of unemployment and declining wages. There was a constant expectation that deflation would soon run its course, that trade would "turn the corner," and that costly emergency measures could be withdrawn. As the depression became more and more prolonged a suspicion arose that British distress was not part of a world-wide condition so much as the result of some fundamental error in British ways of doing business. Elaborate studies were then made to analyze Britain's share of world trade before and after the war and to find the cure for such defects as were most obvious. It is to this spirit of self-examination that we owe the many excellent commission reports that are so frequently referred to in the present study. But the field was not left to official commissions to explore. Chairmen in their addresses at annual meetings of companies, speakers at innumerable banquets, a thousand ready letter writers to the press, all addressed themselves to the task of answering the question "Is England done?" The inevitable result was some muddying of the waters of scientific inquiry, but out of the mass of discussion certain conceptions of the British position seem to be so generally accepted as to represent a basis for revision of British industrial methods. Some of these conceptions bear no relation to wages and need not be mentioned here, but at least two major principles with respect to wages seems to be clearly proven to the British mind. One of these relates to a difference between "sheltered" and "unsheltered" industries, and the other to the fundamental difference found to exist between the American and the British attitude toward wage payments. The two topics will be taken up in turn.

SHELTERED AND UNSHELTERED TRADES

A sheltered industry is one in which the product is not required to compete in price in the world's markets with a similar product made in other countries; an unsheltered industry, accordingly, is one in which the price of the product must be kept at a competitive level, so that the wages of the makers of the product are correspondingly affected. Examples of the former class are the building trades, printing and bookbinding, baking, railway, tram and road transport, and employment in public utilities. Among unsheltered British trades are coal mining, iron and steel, shipbuilding, textiles, engineering, boots and shoes, and chemical manufacture. Another term used for "unsheltered" is "exporting" industries. Sometimes the words "protected" and "safeguarded" are confused with "sheltered"; also it is taken to imply trade-union relationship, but these terms have nothing to do with the original distinction between sheltered and unsheltered trades.

A disparity in level between the two types is shown in Appendix VII by two tables from the report of the Committee on Industry and Trade, giving (1) percentage increase in time rates of wages for December, 1920, and June, 1925, over August, 1914, and (2) comparison of average weekly wage rates.

British industry is so organized that success in many lines is dependent upon a large percentage of export, which in turn involves competitive prices at a wage cost as low as conditions will permit. The more fortunate position of workers in noncompeting lines leads to protest by unsheltered workers, with harmful effect upon the spirit of industry and a constant interruption in production, so clearly illustrated to-day in the case of the coal industry. To compensate for the inequalities as between different types of industries, various expedients have been adopted. As a result the spread between sheltered and unsheltered wages has diminished in recent months and it is confidently hoped that broad business improvement will once more place all types of labor on a level basis. Artificial stimulants such as "Buy British Goods" campaign, inter-Empire exhibitions and Imperial conferences have been applied in order to hasten the recovery of export trade, so that to-day there is somewhat less anxiety as to the plight of the "unsheltered."

There is some question, however, as to the validity of the arguments advanced. In the first place, the disparity between wages in different types of industry becomes marked only at times of very broad readjustment of prices, as in the recent depression. At such a time there is always a wage lag and it is logical that some lines lag more than others; by the time that broad readjustment is complete the sheltered and unsheltered disparity will be largely removed. Again, there is a larger proportion of pieceworkers in unsheltered lines, and, still further, increases in wages of unskilled labor have been at a greater ratio than those of skilled labor. Thus, the apparent inequalities between trades may really be an inequality between kinds of labor. Foreign competition may be less at fault than the form of labor. War-time expansion gave exporting industries too great a degree of prosperity to permit of anything else than more drastic readjustment than has been necessary in tramways and public utilities. The Committee on Industry and Trade suggests that

differing conditions of trade organization and of trade-union organization are further factors which weaken the case of those who maintain that there is a chronic handicap upon workers in exporting industries, to be met by paternalistic legislation or subsidies or some other artificial expedient. It seems safe to predict that the "sheltered and unsheltered" problem will become less and less disturbing as postwar readjustment proceeds.

The relative position of sheltered and unsheltered wages was emphasized after April, 1926, by Great Britain's resumption of the gold standard while continental countries competing with Great Britain in third markets retained their depreciated currency. To meet the lower costs of French and Belgian products the British had to cut costs severely. Selling monopolies abroad encouraged similar organizations as a means to lower distribution costs in the British Isles. British prices did fall as the pound rose in value, and with this adjustment went a fall in the cost of living, calling for proportionate reductions in wages paid in trades guided by the cost-of-living index. This fall was not even among all trades and did not keep pace with price declines because of the familiar lag. It would not be correct to state that this point about the gold standard was a vital one put forward by either capital or labor, but economists have been inclined to lay much stress on it, particularly those opposed to resumption of the gold basis, as one of the obstacles in the path of better business and at the same time better reward to both employer and employee.

WAGES IN THE UNITED STATES

The second of the two wage topics that have received attention in recent months in Great Britain is that which relates to different wage systems in force in that country and in the United States. The prosperity in America at a time when Great Britain was still under severe depression convinced many that there was a clue to the whole situation, a formula which British industry could apply and thus relieve the economic pressure. Individuals and delegations repaired to America to study conditions at first hand. Upon their return many of these visitors published the results of their observations. The two leading statements are *The Daily Mail Trade Union Mission to United States*, *Full Story of the Tour and Members' Reports*, and *The Secret of High Wages*, by Austin and Lloyd. The theses of these studies are best explained by a few quotations. A member of the *Daily Mail* mission writes:

(1) Are the higher wages now prevailing in America the cause of its present prosperity or the effect?

(2) Has high production followed high wages, or vice versa?

These questions were put on every occasion that was likely to produce a definite answer.

There was a decided consensus of opinion in favor of the policy of high wages as a forerunner of greater and cheaper production, and consequently greater consumption and prosperity.

In answer to inquiries regarding wages remaining intact in face of a slump in trade, every employer to whom we put the question was emphatic in repudiating the idea that a reduction in wages in such circumstances would either stem a slump or expedite a return to prosperity.

American employers make no secret of the reason why they pay high wages to their employees. High wages and the fact that no limits are placed upon the

workers' earnings are, in the opinion of the American employers, the best incentives to high production.

High wages also increase the spending power of the workers and enable them to purchase more and more of the commodities they produce. I am in no doubt in this matter. Wherever during my tour I discussed the question in American industrial, financial, and political circles I found the increasing spending power of the working classes generally regarded in the United States as one of the most important factors making for the national prosperity.

American employers of labor know that the payment of high wages results not only in high production but also in cheaper production.

The real lesson lies in this: That it is *increased output* and not *lessened wages* on which the prosperity of any industry depends, and that, subject to all conditions being preserved that secure a man from excessive physical effort and fatigue, the more a man can possibly put out during his hours of labor the better it is for him and for all others similarly circumstanced.

The authors of the Secret of High Wages are more explicit. "Our aim should be to raise wages," they state, and they proceed to elaborate the point by discussing nine cardinal points which lie at the basis of American prosperity. The fifth point, which is of most importance to us at the moment, is thus interpreted:

It is better that labor should be rewarded by wages bearing some relation to output rather than by a fixed wage, the amount of the wages earned by any one man being in no way limited. Contrary to the general belief in Europe, high wages do not necessarily mean a high level of prices. It is to the advantage of the community that the policy of industrial management should be directed toward raising wages and reducing prices.

The following table is presented by the authors to illustrate the differences in the wage situation in the two countries:

[Pre-war = 100]

Year	United States		Great Britain	
	Wage rates	Prices	Wage rates	Prices
1920.....	199	226	230	283
1921.....	205	147	260	181
1922.....	193	149	200	159
1923.....	211	154	170	162
1924.....	228	150	170	174

The contention that higher wages and lower prices, and, therefore, greater prosperity are possible in Great Britain is developed by the authors in a manner which has received some strong support and some equally strong condemnation. For our purposes it is of less importance to record the character of the argument than the effect upon the British wage-paying and wage-earning public. It is not an exaggeration to state that a decided effect has been made by the book and one may anticipate some very interesting experiments in wage policy in an effort to test the validity of the arguments. Even if the new principles turn out to be inapplicable, some advantage may result from a realization of the major defects of the present system.

One more quotation from contemporary British wage theories should suffice. In May, 1926, the Times printed a letter on high wages and high production by B. Seebohm Rowntree, of the great chocolate industry, who is well known as a leader in employer-worker relationship. In his letter Mr. Rowntree stated:

Up to now there has been far too widely spread a view among employers that low wages are essential to cheap production, which in its turn is essential to the prosperity of Britain, since 30 per cent of the goods we manufacture must find a market abroad and are exposed to world competition. This view has been encouraged, indeed to some extent it has been rendered accurate, by the fact that many workers are imbued with the idea that increased production may lead to unemployment, the condition which they most dread.

To-day both these errors may be rectified. We have come to a psychological moment, a turning point in industrial history, which may mark the dawn of a new era. I believe that vast numbers of employees and workers are hoping eagerly and sincerely that the great crisis through which the country has passed, marked, as it was, by so much good will and restraint on both sides, should herald a spirit of closer cooperation between capital and labor.

But if our hopes are to be more than vague pious aspirations, we must set clearly before us the precise objective that we wish to be achieved by our closer cooperation. That objective should be higher per caput production leading to higher wages.

Higher production can only come from increased efficiency, both on the part of the management and on the part of the workers. No one who has visited factories in America doubts that the high general standard of life in that country is due, in large measure, to conditions which *can* be duplicated here. It is perfectly possible to secure high per caput production and to pay high wages, and thus to create the new market which is so vitally needed for British goods.

But a good deal of vis inertiae must be overcome before the mentality of employers changes sufficiently to enable them to absorb new ideas as regards methods of conducting industry. The initiative must be taken by employers, acting either singly or in groups. They should approach the workers through whatever channel may be most appropriate in each particular case, and propose that the two groups should jointly explore the path that leads to higher wages. I speak from considerable experience when I say that even when one of the groups is a highly organized body of workers, members of a great national union, astonishing results may be expected from such a step. They can hardly be instantaneous. If the new departure represents a considerable change of outlook on the part of the employer, possibly a number of conferences may be required before he can assure the workers that he really desires to see wages higher. But when once confidence is established, results will follow very quickly.

The workers will certainly tell the employer that not only labor but management must become more efficient, and it will certainly be true. In the United States, Mr. Hoover's committee on waste in industry reported that 75 per cent of the waste was due to management, and it is not likely that the proportion is less in Great Britain.

Yet often management is handicapped in its endeavor to secure efficiency by the difficulties which suspicious or fearful workers place in its way. The pace of progress in a given business can be enormously speeded up when the workers are cooperating with the management to attain a common end.

A determined effort to increase per caput production and wages simultaneously should prove successful, since it is clearly to the advantage of both capital and labor. Capital is seeking feverishly for new markets, while all the time a huge potential home market is closed because the would-be buyers lack purchasing power. It would pay manufacturers handsomely to set aside 10 per cent of the sums now spent on advertising to financing a national educational campaign in order to alter simultaneously the attitude of the workers toward high production and the attitude of employers to high wages. The Americans have learned their lesson and are profiting by it to an almost incredible extent. Trade-union leaders across the Atlantic have changed their attitude and are seeking to increase the efficiency of industry and the per caput production of the workers. American employers recognize that high wages are not only socially desirable, but an essential condition of really prosperous industry.

Can we not profit by their example? I know that to some extent the high per caput production in the United States may be accounted for by special reasons, such as the economic situation existing there at the time of the rise of large-scale industry. But every careful observer of the conditions in the two countries must be convinced that if British labor and capital worked together to secure high wages they could achieve wonderful results. To-day

we have been shaken out of a good many ruts, and the time has come for us to step out boldly on a new and better way.

To turn aside for a moment from the particular theme of this report to the broader aspects of the situation, it should by this time be quite clear that a new spirit has come into British industrial relationships. In some opinions this goes so far as to represent a new industrial revolution; to others, more conservatively minded, the present period represents an inventory or stock-taking interval in British industrial policies, when enterprise has time to indulge in introspection and to study plans for the future. Whether any broad reconstruction will follow is another matter; certainly it may be said, on the other hand, that necessary reforms will not escape for lack of attention. The Nation and Athenaeum for June 26, 1926, sums up the situation thus:

The most important fact in our national life to-day is the transformation that is taking place in the character of our economic activities, shifting the center of gravity of the industrial world and confronting us with problems of an essentially new kind.

We shall become, we believe, less and less an exporting, foreign-investing people, less and less a people engaged in a few large staple industries, more and more a people engaged in the huge mass of new miscellaneous occupations, working for the home markets, which are springing up before our eyes. And in particular we are convinced that the metallurgical group of industries—coal, iron and steel, and shipbuilding, etc.—will gradually cease to play so predominant a part in our national life. We do not predict for these industries any sensational decline. Absolutely they may not decline at all, if our aggregate production and trade increase sufficiently. But they will certainly not expand at the exuberant rate that was normal before the war. Relatively to other industries, they *will* decline. The future is not with South Wales, the Tyne, and the Clyde.

Three years ago the Manchester Guardian (Reconstruction Supplement No. 16) foresaw that a change in the British wage policy was a probable outcome of the reconstruction following the war and indicated that this change would be in the form of piecemeal adjustments rather than of a systematic coordinated settlement. Before the war the basis of industrial order was a system of standard rates of wages, sanctioned by custom and subject to frequent adjustment, by collective bargaining, as conditions required. This status quo was interrupted by the war, in that the relations between different groups of workers were changed, as were also the relations between wages and commercial conditions and those between employers and trade-unions. It has been the aim of employers in general to restore the status quo by renewing these relationships; a considerable number, however, on the principle that times change and we change with them, look forward to the new economic order on a new basis rather than on the restored old basis. The study of American wage systems represents nothing more or less than the grouping of such progressive thinkers for their new basis.

Part II.—WAGE RATES

WEEKLY AND HOURLY TIME RATES

In the previous section the broader aspects of the British wage situation have been treated. The remainder of this study will be given to the more specific consideration of the rates of wages paid in various industries.

In the table shown in Appendix VIII weekly and hourly time rates are given for a large variety of trades. There are so many difficulties in the way of exact statement, however, that such a table must be accepted as only approximate. As will be seen, there is no uniformity in the wage position, not only as between industries, but also as between districts in the same industry and even as between grades within one district. The figures have been compiled from a great variety of sources and should not be used for dead-level comparison with wages paid in other countries unless due allowance is made for special circumstances mentioned elsewhere in this report.

The wages quoted are as a rule minimum rates per hour or per week. Effort has been made to show the average rate throughout Great Britain rather than that of any one city or district.

WAGES AND SALARIES

In order to get a proper perspective on the tables of wages paid to workers, it is interesting to step aside for a moment from the special theme of this report to observe the amounts of weekly payments to persons in other lines of employment. The following table was compiled from a single day's advertisements in a London newspaper, in July, 1926, by applicants for positions:

Business in which formerly employed	Years employed	Present age	Weekly pay expected	Business in which formerly employed	Years employed	Present age	Weekly pay expected
Buyers, salesmen, travelers:			<i>Shillings</i>	Bookkeepers and ledger clerks—Continued.			<i>Shillings</i>
Fruit business.....	11	25	80	Import house.....	15	43	80
Dry goods.....	7	22	60	Printing inks.....	10	38	80
Knit goods.....	13	38	80	Publishers.....	11	29	88
Hardware.....	10	27	72	Managers, secretaries, accountants:			
Soap.....	10	35	120	Import-export manager.....	26	41	120
Silk goods.....	14	38	120	Accountant and secretary.....	15	32	120
Bookkeepers and ledger clerks:				Manager for stockbroker.....	14	29	100
Timber firm.....	15	31	88	Expert for rubber growers.....	20	40	160
Engineering contractor.....	14	30	72	Manager for enamel manufacturers.....	20	40	120
Ship chandler.....	24	42	60	Secretary for mining firm.....	10	34	120
Typewriter company.....	15	34	100				
Coal merchants.....	6	33	60				
General merchants.....	14	33	100				

Stenographers citing varied experience up to 20 years ask to be engaged at weekly rates ranging from 50 to 100 shillings. Invoice clerks, also with long training, expect to receive an average of 60 shillings. Foreign correspondents, with continental languages at their command, place their demands somewhat higher, at about 100 shillings, while general office clerks appear to average between 40 and 80 shillings and office boys between 20 and 40 shillings. Many of the applicants, household employees, clerks, stenographers, salesmen, secretaries, and office managers, would describe themselves as "business people" rather than "workers" and their remuneration as "salary" rather than "wages." In many cases they belong on the border line between the two. Below the line they would be organized and their pay would be related to the cost of living or would fluctuate in accordance with some other definite scheme. Above the line they forfeit this protection for the debatable advantage of entering the salaried class. At the same time they enter the open market, beginning a job at the best terms they can obtain and securing promotion through individual effort rather than group action. The money value of board and lodging should, of course, be taken into consideration in many instances. Employment agencies say that the sums stipulated by the applicant represent the maximum which they can hope to obtain. It is more than probable, however, in the present period of heavy unemployment (the postwar figure fell below 1,000,000 for the first time in April, 1926) that some applicants quote a bargain figure in order to be just a shade under the going market.

LIMITATIONS OF THE TABLE OF WAGES

Some of the figures quoted in the table in Appendix VIII refer to wages and some to earnings, a very different thing. Again, time rates only are quoted, even in some trades in which piece rates prevail. Further, the weekly figures relate to full time, whereas there is actually a large amount of part-time labor, caused either by lay-offs or voluntary absenteeism that reduce the amount actually received by workers.

These are only the major factors which require all wage figures to be taken with caution. Many other factors enter into the broader aspect of the question of British wages and it may be just as well to survey them now, in order that the setting may be made familiar. Constant repetition of the caution to be observed in making international comparisons would be annoying to readers, so that the injunctions here given will not recur. A different policy is followed by the Committee on Industry and Trade, in their survey of industrial relations, as the wages section of their volume never fails to point out, in every instance, the inadequacy of the critical apparatus with which they had to work.

SOURCES OF INFORMATION

The most useful fund of information about British wage rates is the monthly Ministry of Labour Gazette. Each issue contains as a regular feature a section entitled "Changes in wages and hours dur-

ing the preceding month," decreases being conveniently printed in italics. As this regular feature has been continuing for a long time, the change mentioned is not always followed by a statement of the resulting level of wages, so that reference to many earlier issues is often necessary to ascertain the shillings and pence significance of the changes in question. Again, the changes are listed wherever, as well as whenever, they occur, leaving some doubt in the mind of a reader unfamiliar with the localization of different British industries as to the breadth of application of a change in a given area.

Another defect in returns in the Labour Gazette is the fact that they are incomplete. Wages of agricultural labor in general, the police, Government employees, domestic servants, shop assistants, and clerks are not given. Also, there are unavoidable omissions of changes in industries normally reported, as employers sometimes have private arrangements with their workers which they fail to report.

The Gazette itself obtains its information of wage alterations from (a) arbitration or conciliation proceedings under definite acts, (b) orders issued under trade board acts, (c) returns by many employers, associations, and trade-unions, (d) reports from correspondents of the Ministry of Labour, and (e) from the press. There are no compulsory powers attached to the inquiries by the ministry, so that the reports lay no claim to exhaustiveness or infallibility.

There has been no comprehensive census of wages or earnings since the voluntary census of 1906. For the latter part of 1926 and the early part of 1927 there is promise of a new wage census, along lines not definitely announced but probably related to the census of production, 1926, an ambitious work, which is expected to supplement the earlier one dating from 1907. The lack of any comprehensive data has led the Committee on Industry and Trade, in its brief survey of wages, to disavow any finality in its own conclusions as follows: "There are no official data for obtaining a statistical measure of changes in the efficiency of labor or industrial organizations * * *. It is not possible to discuss these essential factors in the problem on the material available from departmental sources."

The difficulty of securing the facts as to wages paid, changes in these wages from time to time, and the proportion of total workers involved in any such changes is indeed a serious difficulty, but it is a minor one compared to the far more intricate task of determining the relationship between wages and earnings, or at least income, of the workers concerned. If no information as to a particular branch of a trade is available, the group in question can simply be omitted. There are trades enough that do furnish wage statistics to permit of a representative study being compiled, as far as wages alone are concerned.

REMUNERATION OTHER THAN WAGES

The trouble is that wages do not represent the only remuneration of the worker. There are many other forms of remuneration as well, supplements, bonuses, profit-making schemes, living-in arrangements, full and partial food or food-money provisions with no uniform method of evaluation, a great variety of part-time and overtime sliding scales, differing within industries as well as between indus-

tries, a similar situation as regards Sundays, national holidays and workers' annual holidays, subsistence allowances, family allowances, housing accommodation, and many similar factors that apply quite generally throughout trades where wages as such per hour and per week are adequately enough reported. It is more than probable that some coefficient would have to be applied to the reported wage in almost every single branch of every trade to take care of one or another of these supplements, but there is such an utter lack of uniformity about them and they change in such an uncontrolled manner that no one has ever attempted to work out the proper coefficient, or series of them, to determine how much recompense (not wages alone) a worker receives for services rendered.

The supplements above mentioned apply quite generally among workers. In addition there are many forms of specialized or localized supplements that apply only in particular trades and particular localities. Unless due allowance is made for these, as well as the broader type, one can not arrive at an accurate estimate of the pay given for work done. These minor, localized additions to pay, however, are not generally reported, so that only the technically informed would know of their existence. They come to the fore when disputes arise in particular trades; in fact, they are often the main grievance in such disputes, showing that some value is attached to them by those concerned, however, little known to the public and even to the statistical economist. Examples of these narrower forms of supplements to wages are briefly mentioned. In the coal dispute that lay back of the great strike beginning in May, 1926, frequent reference was made to "miners' coal." It was a fairly widespread belief that household coal was generally supplied to miners free of cost but such was only partly true, as in some instances a charge of 3s. 6d. plus 1s. per ton for cartage is made. The value of this, as a supplement to earnings, and its significance as an added cost to coal production, differed according to the season and the grade of coal. Its money value per week to the wage earner has never been computed. Similar items, among a great variety that crop up from time to time as receiving an accounting status are "tool money" received by some cabinetmakers, "cold allowances" to dock laborers, "poundage" paid to firemen, uniforms to omnibus drivers and conductors, "dirty money" for dock laborers, and so on in great variety. The custom of the trade in each instance makes it desirable from the point of view of the employer and of the worker to retain these features that make ascertainment of wages and earnings so baffling for the statistician. Still, wages are set by circumstances, not to suit the convenience of investigators.

Due allowance should likewise be made for costs reverse to those just mentioned, that is, to particular forms of expense, however small, to which workers may be subject by reason of their particular employment. Purchase of goods by scrip at company stores, for example, was a source of agitation at one time among American laborers at mining towns and lumber camps. The significance of this item in the British wage situation can not be very great, if the lack of agitation thereupon is any criterion; at least no allowance is made for it in determining the laborers' "real" wages. Perhaps a more important item would be the transportation costs for workers

who live at some distance from their jobs; no uniform accounting for such costs and no general statement of the degree to which the worker shoulders them is available. "Living-in" provisions and the value of noon-day meals is another item. The fact that such costs are not standardized in accounting is revealed in the Ministry of Labour report into the light refreshment and dining-room branch of the catering trade, 1926, in which estimates of the value of full board and lodging as furnished to 1,738 employees ranged, through 32 grades, from 10 to 28 shillings per week. As practically every employee received at least partial board, the cash received by them was not a true index of their wages.

These items other than cash in the remuneration of workers assume really great importance in estimates of wage changes as between any two years, mainly between pre-war and current dates, when the latter year is presented in the usual form as an index on the pre-war date as a base of 100. Such an index is very deceptive unless full allowance is made for the changes in supplements in other form than cash. Percentages change considerably when allowance is made for such items; particularly as between separate trades where supplements may have changed in opposite directions caution must be exercised in making comparisons.

Again, wages as quoted refer to time rates. The ratio between time and piece rates varies between trades and has undoubtedly altered since 1906, the date at which the latest investigation into the ratio was made. Certainly no international comparison with British wages should be made without due regard to this point.

TERMINOLOGY IN REPORTS

There is still one more difficulty in reaching the facts as to British wages and earnings, namely, the highly technical terminology employed in reporting wage changes and the difficulty which the layman encounters in converting these terms of the Labour Gazette into so many shillings and pence. Take, for example, the following wage changes as reported:

Sheffield stainless cutlery huffers: Rates fixed for hafting common quality stainless, varying according to size, from 1s. 6d. per dozen for 3 inch to 1s. 10d. per dozen for 3½ inch, plus the current rate of bonus and poundage; common egg Waterloo to be 4d. per dozen extra to Oval. The current rate of bonus is 27½ per cent, and the poundage varies from 2½ to 12½ per cent according to the materials used.

Another change is applied to a very strictly limited class:

Decrease of 5 per cent on general minimum time rates to workpeople employed in making dollied and tommed chain from No. 6 I. S. W. G. up to and including 1½ inch in diameter and hand-hammered chain from iron ¾ inch up to and including 1½ inch diameter.

or again:

Glasgow dock laborers (ship men only) discharging grain cargo by elevator to receive an increase of 3d. per hour as "dirty money," plus an additional 4d. per hour "dirty money" for cargoes other than those from north Africa and Palestine, in which case 6d. is paid.

Female labor in the brush and broom trade: The rates remain unchanged (at a date when other changes were recorded) for "those employed on cocoa and all other fiber brooms and banisters of any

length (except whisk and Piasava brooms and banisters) and bass heads up to 12-inch stock, 30 knots round." The share of labor falling under this head could be figured only by an expert.

In lace manufacture "certain adjustments are made in the piece price list affecting half-gauge goods, four-point goods, and jacked fillet net, and increases are granted on rates applicable when using colors, varying according to proportion of colored spool threads from 5 to 15 per cent."

These quotations show such an utter lack of standardization in wage determination as to render worthless any statement which purports to give the wages paid in the lace trade, or brushes and brooms, or, for that matter, in any trade. Exactness is a desirable fact in statistical reports, but no conscientious statistician should report it where it does not exist.

There are thousands of kinds of wages paid. The work of recording these resulting wage levels and of keeping them up to date is more elaborate than any official bureau could hope to undertake and certainly beyond the powers of any single investigator.

COMPARATIVE WAGE LEVELS

In the preceding section current wages or earnings in a wide variety of trades are indicated. The immediate question which arises is, How do these rates and earnings compare with those in force immediately before the war and, following the war, with those paid at the height of the postwar boom, and later, during the depths of the depression? Further, how do they compare with wages in America?

The temptation is always present to reply to this familiar inquiry by means of a compact table that sets forth the facts. The comment on the limitations of the table of wages should, however, justify one in refusing to attempt any such table. His base is too instable to warrant a structure on top of it, as there is entirely too wide a margin of error. A table with any pretense of accuracy would require very extensive original research and every figure would at best be tentative.

It seems to be the fashion, however, to present economic facts in a nutshell and the writer is disposed to follow the fashion, having disarmed criticism by the preliminary disclaimer for any very high degree of accuracy. The following table is the result of merger of various partial estimates on different base years, with conversions to a common base. The separate sources have not all approached the topic from the same standpoint. It is, nevertheless, quite possible that the table gives a fairly correct impression of the trend of British wages over 25 years. British average weekly wages, and equivalent in dollars, are shown in the following table:

Year	Average weekly wages	Equivalent in dollars	Increase on 1914 as 100	Year	Average weekly wages	Equivalent in dollars	Increase on 1914 as 100
	s. d.		Per cent		s. d.		Per cent
1900.....	29 4	\$7.12	95.0	1921:			
1901.....	28 11	7.02	93.0	June.....	77 8	18.90	250.6
1902.....	28 5	6.90	91.5	December.....	65 10	15.89	210.7
1903.....	28 3	6.86	91.0	1922:			
1904.....	28 0.5	6.81	90.3	June.....	58 4	14.17	188.0
1905.....	28 2	6.84	90.7	December.....	53 7	13.02	172.7
1906.....	28 8	6.96	92.3	1923:			
1907.....	29 10	7.24	96.0	June.....	52 0.3	12.65	167.7
1908.....	29 7	7.18	95.2	December.....	52 0.3	12.65	167.7
1909.....	29 2	7.08	93.9	1924:			
1910.....	29 3	7.10	94.2	June.....	52 10	12.85	170.4
1911.....	29 3.6	7.11	94.3	December.....	53 7	13.02	172.7
1912.....	30 1	7.31	97.0	1925:			
1913.....	30 11	7.51	99.6	June.....	54 4	13.20	175.0
1914.....	31 0.7	7.54	100.0	December.....	52 6	12.76	169.2
1920:							
June.....	78 3	19.04	252.5				
December.....	85 5	20.75	261.9				

The conversions have been made at par, irrespective of the exchange value of the pound. The weekly rates at present are about 75 per cent above pre-war; hourly rates, on the other hand, by reason of a reduction in the number of hours worked per week, are now approximately twice as high as they were in 1914.

The next task is to break down the above composite table, which fails to portray the facts as to any one industry any more closely than a composite photograph of a thousand people may resemble any one individual. Fortunately, this task is not very difficult as official reports and the separate trades have conscientiously endeavored to reach a comparison of pre-war and present. The average rates and earnings for pre-war can be determined quite closely; pre-war wage factors, on the other hand, are infinitely more diverse. There is a wider range of pay for different types of workers and rates change far more frequently, and are supplemented to a much greater degree by extra remuneration of one sort or another.

At the request of the coal commission the Ministry of Labour made a percentage comparison between British wages during the five-year period 1909-1913 and those current in September, 1925. The intention was to avoid the inadequacy of the base usually taken, the year 1914 or even the beginning of August, 1914, which could be called pre-war only in a strictly technical sense. Every effort was made to check the ministry table, before its publication in the coal report with explanatory notes. The table is summarized in Appendix IX.

Summing up such figures as were available, the Labour Gazette for October, 1925, reckoned the percentage increase in full-time weekly earnings on August, 1914, as base, as follows:

Year	March	June	September	December	Year	March	June	September	December
1920.....	130-135	150-155	160-165	170-180	1923.....	70	65-70	70	65-70
1921.....	160-170	145-155	130-135	110-115	1924.....	70	70	70-75	70-75
1922.....	100-105	85-90	75-80	70-75	1925.....	75	75	75	75

Another estimate of wage fluctuations in 1914 shows considerable differences as between trades but a remarkably close approximation, on the average, to the cost-of-living figures. An estimate of movements of time rates or piece earnings (for normal week at each date) in the United Kingdom, 1914-1926, is shown in the following table:

Occupation	July of each year													January, 1926
	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925		
Bricklayers.....	100	103	108	123	160	188	228	222	168	161	165	170	170	
Bricklayers' laborers.....	100	103	113	133	180	225	284	265	185	177	183	191	191	
Printers (compositors).....	100	100	105	120	157	196	246	265	227	214	213	213	213	
Railway men.....	100	110	120	155	195	225	280	257	213	203	203	203	203	
Dock laborers.....	100	101	130	150	193	209	266	265	200	167	200	200	200	
Cotton operatives.....	100	105	110	110	157	202	259	210	169	160	160	160	160	
Woolen and worsted operatives.....	100	115	126	144	164	196	239	243	183	180	180	180	180	
Engineering artisans.....	100	110	111	134	173	196	231	229	188	146	146	146	146	
Engineering laborers.....	100	110	111	134	173	255	309	309	249	178	178	178	178	
Coal mining ¹	100	113	129	136	187	224	260	(3)	147	132	170	164		
Agriculture (England and Wales).....	100	112	-----	-----	³ 189	210	² 260	260	175	156	156	174	174	
General average.....	100	{105-110	{115-120	{ 135	175	210	{250-255	{245-255	{185-190	{165-170	170	175	175	
Cost of living.....	100	125	147	180	205	210	232	219	184	169	170	173	175	

¹ Average earnings per shift in July or in second quarter of year.

² Strike.

³ August.

WAGES IN VARIOUS OCCUPATIONS

The following supplements the preceding table, with detailed notes as to wage changes in various forms of employment. Once more it seems desirable to caution the reader against too implicit reliance upon comparative tables. There is a wide spread in wages in every industry, and one who is disposed to prove a point may always select wage rates in such a way as to prove an exceptionally heavy increase between years or an unusually small advance, just as he is inclined.

RAILWAY WAGES

In illustration of the above point the following excerpt from a journal supporting the employers' viewpoint may be taken as typical:

The railway porter earns nearly twice as much as the farm laborer, although the latter is really more skilled and has more trying work in bad weather.

Railway men's wages have been increased out of all proportion to those obtained by men in most other trades; the companies are paying about 120 per cent more than they paid before the war, whereas the cost of living may be reckoned as about 76 per cent above the pre-war level, and the general rise of wages (railway men's included) is about 75 per cent higher. Therefore railway men must be getting their increased incomes at the expense of all other persons, including other wage-earners, especially those in the unsheltered trades.

The change in railway weekly wages since 1907 is shown in the following table:

Grade	1907, average	1914, July	1920, December	1923, June
Driver.....	40s.	30s. to 48s.	88s. to 106s.	72s. to 90s.
Fireman.....	23s. 9d.	18s. to 30s.	70s. to 88s.	57s. to 72s.
Guard.....	28s.	21s. to 35s.	72s. to 82s. 6d.	52s. to 65s.
Signalman.....	24s. 8d.	20s. 4d.	67s. to 81s.	49s. to 61s.
Plate layer.....	19s. 5d.	18s. to 27s.	68s. to 76s.	49s. to 55s.
Porter.....	18s. 8d.	15s. to 24s.	66s. to 72s. 6d.	47s. to 51s. 6d.

For the principal grades of adult workmen in the traffic sections of the railway service the rates of wages in operation at the end of September, 1925, show increases ranging from 28s. to 36s. a week above the pre-war averages for the corresponding grades. Owing to the wide variation in the pre-war rates of wages the percentage increases vary considerably. The following table shows examples of the rates of weekly wages in 1914 and at the end of 1925 for certain grades of workers:

Grade	Rates of wages in—		Percentage increase on pre-war rates
	August, 1914 ¹	September, 1925 ²	
Porters, class 2:			
London.....	20s.	48s.	140.
Industrial and rural areas.....	18s.	46s.	156.
Goods porters:			
London.....	23s.	51s.	122.
Industrial areas.....	22s.	50s.	127.
Rural areas.....	19s.	47s.	147.
Permanent way men—undermen:			
London.....	24s. and 25s.	52s. and 53s.	112 and 117.
Industrial areas.....	22s.	50s.	127.
Rural areas.....	20s.	48s.	140.
Guards.....	22s. to 31s.	50s. to 65s.	110 to 127.
Ticket collectors, class 2.....	23s.	54s.	135.
Engine drivers ³	39s. to 46s.	72s. to 90s.	85 to 96.

¹ The rates quoted for all grades but engine drivers represent the approximate average rates of the grades; the rates for engine drivers represent the approximate usual range.

² The rates quoted are the standard rates, inclusive of bonus (if any).

³ Drivers of long-distance trains receive mileage payments in addition to the rates quoted.

In the case of mechanics and artisans employed in the railway shops the rates of wages have only recently been standardized and particulars are not available which would enable a comparison to be made between the pre-war and present positions.

The average weekly earnings of adult male railway employees in receipt of wage rates in the week ended March 28, 1925, were as follows:

	s.	d.
Conciliation staff.....	67	4
Shop and artisan staff.....	69	11

The present average earnings of such staff are probably slightly lower than the figure quoted. In 1913 the average earnings of all employees of the principal railway companies, other than clerks and salaried officials, were 27s. 11d. per week. This average covered women, youths, and boys as well as adult workers, and is not, therefore, comparable with the average earnings quoted above for 1925, which apply only to adult workers in the sections specified.

COAL MINING

The rate of wages in coal mining varies considerably by districts. In the principal districts the highest earning is nearly 15s. 6d. a shift, say 85s. a week, in south Yorkshire, and just over 15s. in south Wales. The six-day week in these districts brings full-week earnings to 90s. The lowest earnings per shift, 12s., are paid in Northumberland, where the married hewer also gets a free house and free coal, making weekly earnings, at 5½ shifts 73s. and over. About 70s. is the lowest weekly earnings as paid in Lancashire, part of the

Midlands, and Scotland. Over the whole country hewers average somewhat over 76s. Lower-grade workers range from 45s. in Lancashire, to 52s. 6d. in Yorkshire.—(Abstract from Coal Report.)

The controversy in the coal industry offers an excellent example of the manner in which authentic figures may be used to prove any desired contention. The Labour Year Book for 1926 states that "maximum possible weekly earnings" in coal mining were 34s. in June, 1914, and 52s. in the second quarter of 1925. The same basis of computation must have been employed in the first memorandum submitted by the miners' federation to the Royal Commission on the Coal Industry (1925), as the statement was there made that money earnings were then about 53 per cent above pre-war. This is the percentage ratio between 52s. and 34s. As the cost of living increase was admittedly 73 per cent the disparity seemed striking. It must be noted, however, that the "maximum possible earnings" covered all classes of coal labor and was accordingly a "maximum average," to use an unprofessional term, rather than an absolute maximum. If, furthermore, instead of June, 1914, the five-year period 1909-1913 is taken as a base, the increase in miners' wages over pre-war during the latter half of 1925 was, as the coal report shows, 78 instead of 53 per cent, while the comparable cost of living increase was 76 per cent.

The Government mines department, which furnishes the official quarterly ascertainment of coal costs and earnings, compiled the following pre-war and post-war comparison between June, 1914, and June, 1925, of earnings per shift, by districts:

District	Average earnings per shift		Per cent increase
	June, 1914	June, 1925	
Northumberland.....	s. d. 6 2½	s. d. 9 2½	49
Durham.....	6 2½	9 11	60
Yorkshire and east Midlands.....	6 7½	10 11½	65
Lancashire, north Staffordshire, Cheshire.....	6 0½	10 0½	67
South Wales and Monmouth.....	6 9	10 7½	38
Scotland.....	6 9	10 3	32
Other districts.....	5 6½	9 5½	72
All districts.....	6 5½	10 4½	60

This table should not be used as the basis of wage statements unless due allowance is made for the reduction of hours in 1919 from eight to seven and unless allowance is made for various supplements to money wages.

Much caution should also be employed in gauging the relative increase of wages by the percentage additions to different standard rates. The standards date from different years, 1879, 1888, 1911, 1915, 1921, they differ by districts, they receive supplements that differ by districts and classes of labor, and they apply differently to time workers and pieceworkers. One familiar table, quoted in the coal report, shows a 33 per cent increase, in June, 1925, over August 4, 1914, but this should not be taken as an indication of the relative increase in wages; it shows rather the percentage of increase in

percentage additions to standard rates at the periods in question. In view of the above-mentioned variables that must be added to the above double percentage computation, it is clear that no one but a technically informed expert is entitled to employ such figures. Since the coal strike has made wage rates a matter of universal interest, however, it is common to see such intricate tables glibly quoted, and, naturally, misinterpreted.

IRON AND STEEL

The wage increase over August, 1914, varies widely between districts and classes of workers because of differing systems of wage control. The 1906 wages at blast furnaces and iron and steel works averaged about 33s. weekly, and at the outbreak of war this had risen only slightly, to about 36s. Returns secured by the National Federation of Iron and Steel Manufacturers for March, 1925, show average earnings of 63s. 7d. a week. This represents a percentage increase of 76 points. The Committee on Industry and Trade, in their report already referred to, gives the comparative table shown in Appendix X.

As in the case of other lines of employment, so in the case of iron and steel there is a desire to portray the situation as the most crucial and extreme. The correspondent of the London Times Trade Supplement writes:

The method of wage regulation in the iron and steel industry has for many years produced more frequent wage fluctuations than those which have been recorded in other industries.

It is not surprising, therefore, to find that the increase in wages in this industry between 1914 and 1920 was greater than the rise in wages in industry generally, or that the fall from 1920 to 1925 has been more severe. Percentage increases of wages over pre-war are shown in the following table:

Occupation and district	Decem- ber, 1920	Decem- ber, 1925
	Per cent 200-300	Per cent 35-75
Blast-furnace men: Cleveland.....		
Iron puddlers:		
North of England.....	240	65
Midlands.....	280	70
Scotland.....	240	50
Steel smelters: North of England.....	160	20
Laborers: North of England.....	200	70

The average weekly earnings of all workers in the industry rose by about 200 per cent up to the end of 1920 and at the end of 1925 were about 70 per cent above pre-war.

ENGINEERING AND SHIPBUILDING

Wages at 16 engineering and 9 shipbuilding centers are deceptive when taken on a weekly basis, as hours were reduced from 53 or 54 to 47. This merely means, however, that workers had more leisure, as overtime has not been necessary during the rather poor business

of the past few years. Average, unweighted, of weekly time rates is shown in the following table:

Occupation	Aug. 4, 1914	Sept. 30, 1925	In- crease	Occupation	Aug. 4, 1914	Sept. 30, 1925	In- crease
Engineering:	<i>s. d.</i>	<i>s. d.</i>	<i>Per cent</i>	Shipbuilding—Contd.	<i>s. d.</i>	<i>s. d.</i>	<i>Per cent</i>
Fitters, turners.....	38 11	56 6	45	Platers.....	40 4	54 7	35
Iron molders.....	41 8	60 0	44	Riveters.....	37 9	52 0	38
Pattern makers.....	42 1	60 11	45	Ship joiners.....	40 0	57 9	44
Laborers.....	22 10	40 2	76	Laborers.....	22 10	38 5	68
Shipbuilding:							
Shipwrights.....	41 4	55 7	35				

Measured by recognized weekly time rates of wages, the general level of wages is abnormally low. It is doubtful whether such figures truly represent the position. A considerable proportion of the men are working under systems of payment by results, usually straight piecework. Before the war it was commonly recognized that a pieceworker earned about 25 per cent more than his nominal time rate. At the present time it is laid down by a national agreement that the excess shall be not less than 33 $\frac{1}{3}$ per cent. Moreover, in a period of over 10 years improvements in tools and machinery have enabled the pieceworker to increase his output and his earnings. Overtime rates of payment have also been raised since 1914 from time and a quarter for two hours to time and a half for all overtime.

In addition to these factors, which have tended to render the increase in actual earnings greater than that in nominal time rates of wages, it must not be overlooked that the rate of output has probably increased since the hours were reduced from 53 or 54 to 47 per week in 1919. If all these influences are taken into account, it seems probable that the increase in the average earnings of skilled workers is appreciably in excess of the rise of 45 per cent in weekly time rates. At present, however, precise statistics on this point are not available.

TEXTILES

Cotton industry.—The Labour Gazette for October, 1925, estimates that weekly wages in the cotton industry are about 61 per cent above pre-war, which figure becomes 86 per cent if the reduction of hours is counted. The Committee on Industry and Trade, in an effort to check these figures, secured rates of 20s. plus for pre-war and of 37s. 6d. for May 23, 1925, an increase of 85 to 90 per cent. The data on which the figures were based were not wholly comparable for the two years.

Wool industry.—The wages for a full working week in September, 1925, were between 80 and 90 per cent higher than in pre-war times. As hours have been reduced the value of the higher level is correspondingly increased. The Committee on Industry and Trade supplemented this estimate of the Labour Gazette by returns covering 45,000 workers, revealing an increase from 17s. 8d., pre-war, to 37s. for the week ending May 23, 1925, an increase of 109 per cent, which is admittedly not an accurate figure for the whole wool industry.

Other textiles.—It has been computed that the wages of hosiery workers increased 66 $\frac{2}{3}$ per cent and those of time workers in the carpet industry 70 per cent over pre-war.

DOCK LABOR

The rates of wages of ordinary dock laborers in 1914 varied at the different ports, being usually from 4s. 6d. to 6s. 8d. per day, averaging approximately 10 hours. In September, 1925, the rates were 11s. per day of eight hours at the smaller ports, 12s. at the larger ports, and 13s. 6d. a day for certain classes of men at the London docks. The increases in daily rates thus range from about 80 to 140 per cent, while those in hourly rates are somewhat greater.

No information is available as to the average weekly earnings of dock laborers either in 1914 or at the present time.

PRINTING

The average (unweighted) of the recognized time rates of wages in 26 large towns for hand compositors on book and jobbing work in September, 1925, was 73s. 9d. a week, and that for bookbinders and machine rulers 73s. 4d. a week. These rates compare with 35s. 8d. and 33s. 11d., respectively, in August, 1914, and show increases of 107 and 117 per cent. The hours of labor in a full week were reduced from 50 or 51 to 48 per week in 1919, and the percentage increases in hourly rates of wages are therefore greater. Comparative figures as to the average time rates of wages for other occupations and particulars as to the average earnings are not available.

PUBLIC-UTILITY SERVICE

For unskilled laborers employed in the nontrading services of municipalities in 28 large towns the average weekly rate of wages shows an increase of about 99 per cent over that for August, 1914, from 26s. 9d. to 53s. 4d. per week. For unskilled laborers at gas works the average of the rates at the end of September, 1925, in over 40 large towns was 52s. 11d., compared with 25s. 8d. in August, 1914, an increase of 107 per cent. The average rate for unskilled laborers in the electricity-supply industry in about 50 large towns in September, 1925, was 54s. 10d. a week, compared with 26s. 6d. in August, 1914, an increase of 107 per cent. In the tramway services it is estimated that the average weekly rates of wages in September, 1925, in about 50 large towns were 59s. 2d. for drivers and 54s. 9d. for conductors. These rates compare with 30s. 6d. and 26s. 7d. in 1914, and thus show increases of 94 and 106 per cent. In all these cases the weekly hours were reduced between 1914 and 1925, and the increase in hourly rates are accordingly greater. Information is not available as to the comparative rates of wages for other classes of workers in these services nor as to the average weekly earnings of male workers generally.

BUILDING TRADES

The table following shows the relative increase in wages in the building trades since pre-war.

Occupation	Aug. 4, 1914	Dec. 31, 1920	Dec. 31, 1924	Sept. 30, 1925	Per cent over 1914
	s. d.	s. d.	s. d.	s. d.	
Bricklayers.....	40 7	100 10	73 4	73 6	81
Masons.....	39 7	100 10	73 7	73 8	88
Carpenters and joiners.....	39 11	100 6	73 4	73 5	84
Plumbers.....	39 8	101 11	73 5	73 7	86
Plasterers.....	40 0	100 10	73 8	73 10	85
Painters.....	36 3	99 3	72 1	73 0	101
Laborers.....	27 0	87 3	55 5	55 7	106

The increase in weekly full-time wages, allowing for the effect of the reductions which have been made since 1914 in the weekly working hours, was approximately 31s. 9d., or about 95 per cent.

The per cent of increase by weeks is smaller than that in hourly rates as compared with 1914, as the number of hours per week was reduced from about 49¼ to 44¼.

AGRICULTURE

The minimum rates of wages of ordinary agricultural laborers in England and Wales fixed by orders of the agricultural wages board range from 29s. to 37s. 6d. a week, the rates in 28 of the countries being 30s. or 31s. a week. These rates include the value of certain allowances in kind when given by the employers. In 1914 the cash rates of wages, which were subject to the addition of certain allowances, ranged from 13s. to 21s. a week. It is estimated by the Ministry of Agriculture that the average of the rates of wages for ordinary laborers in England and Wales is about 31s. 5d. a week, compared with 18s. in 1914, an increase of about 74 per cent. Particulars as to the average earnings of all male workers in the industry, including horsemen, cattlemen, and shepherds, are not available. It should be observed that the inclusion of overtime payments, harvest money, and other extra earnings might yield results differing to some extent from those shown by a comparison of the full-time rates of wages.

WAGE CHANGES OF RECENT PERIODS

Following six years of increasing wages, net reductions began in 1921 and continued, although on a declining scale, during the next two years. In 1924 there was an interruption in the process of readjustment, resulting in a net increase of some half-million pounds in weekly wages. In 1925 the interrupted readjustment set in again with the rise of the pound sterling to par after re adoption of the gold standard, with the natural consequence that the cost of living declined and with it the general level of wages. The organized determination of workers to resist this automatic principle led to the disputes which began in 1925, especially in engineering, railways, and coal mining, and which came to a head in the general strike of May 1, 1926, the climax period of postwar wage readjustment and at the same time the catastrophe period that must occur whenever wages are finally brought in line in a general deflationary movement.

A summary of wage changes during 1925 from the Ministry of Labour Gazette for April, 1926, and a comparison of the 1925 figures with those of the years since 1915 from the same source, are given as Appendix XI.

APPENDIXES

APPENDIX I

SUMMARY OF WAGE CHANGES DURING MARCH, 1926

There were about 75 wage changes reported by the Ministry of Labour Gazette for March, 1926, along the following lines:

(a) Changes in the amount above the standard rate, in selected localities:

Coal miners—Increase of 5.16 per cent on 1918 standard.

Coke—Decrease of 2.5 per cent.

Pig iron—Decrease of ¾ per cent on 1905, plus tonnage bonus.

Pig iron—Decrease of 6¼ per cent on 1905.

Pig iron—Basis rate plus 3 farthings per hour.

Rolling mill—Decrease of 2½ to 50 per cent above 1891.

Rolling mill—Decrease of 6¼ to 17½ per cent above 1909.

Four separate years of "standard" rates are mentioned while in other instances no year is cited.

(b) Wage change by adjustment of bonus:

Lead miners—6d. off bonus.

Brickmakers—5 per cent bonus on weekly earnings granted.

Pig iron—Various types of bonus, according to base rates, also tonnage bonus and "special temporary" bonus of 1 penny per hour.

Brassfounders—Bonus of 15s. 6d. granted per week until worker 21½ years old, thereafter "full" bonus.

Bedstead workers—2s. flat rate bonus.

An "extra" payment to certain cotton-mill workers, on top of piece price list, is apparently another form of bonus.

(c) Miscellaneous types of wage adjustments:

In the month under consideration certain iron-mine workers received a "temporary increase," provisionally 18 weeks, of 1s. 9d. per shift in minimum wages, the recipients in question being those who were not on the cost-of-living basis prior to October 12, 1925.

Another unique wage change in March was a decrease to pig-iron miners of 5/152 of such increases as they had received between August, 1914, and April 30, 1921, bringing the total of such decreases to 131/152 of such advances.

In the mill-sawing industry a minimum rate of 1s. 5d. per hour was adopted; presumably all future adjustments will be on a percentage basis with relation to this minimum. In one iron-mining center the wage change took the form of "an increase of one penny per shift in the bargain rate."

Finally, there were many changes in the flat rate, involving an increase or decrease in the hourly or weekly pay. The changes are introduced sometimes for surprisingly small amounts—that is, when stated in terms of hours. For example, in March, certain builders were advanced 2 to 3 farthings per hour, which comes to about 2 to 3 shillings more per week, when full time is worked. In round figures, a farthing an hour always involves a variation of 1 shilling, or 25 cents a week.

Among the 75 wage changes listed in the March Gazette only one was defined as a change in earnings rather than wages, when certain quarry workers had their earnings reduced 2d. in the pound sterling.

The odd percentages and fractional amounts that figure in so many adjustments arise out of the principle of sliding scales corresponding to up or down movements in the cost of living or in retail prices. This principle is explained in detail in another part of the report.

APPENDIX II

REAL WAGES IN LONDON AND OTHER CAPITAL CITIES

The numbers in the table have been obtained by dividing the index number of the rise in money wages (hourly time rate) between July, 1914, and April, 1925, by the official index number issued by the country concerned of the rise in the cost of living in the same period. (The level of the "real" wages in July, 1914, is taken as 100 for each occupation and capital city.)

Occupation	London	Berlin	Brussels	New York ¹	Paris ²
BUILDING TRADES					
Skilled:					
Masons.....	107	97	150	-----	109
Bricklayer.....	107	94	150	116	109
Carpenter.....	107	98	167	135	104
Joiner.....	107	141	172	104	107
Plumber.....	102	140	151	129	101
Painter (general).....	120	112	137	152	99
Unskilled, laborer (general).....	117	113	136	151	130
ENGINEERING TRADES					
Skilled:					
Fitter.....	99	-----	117	125	91
Iron moulder (hand).....	92	-----	125	132	99
Pattern maker.....	91	-----	123	111	108
Turner.....	99	-----	125	-----	128
Unskilled, laborer.....	115	84	137	93	118
FURNITURE TRADES					
Skilled, cabinetmaker.....	107	-----	160	-----	137
PRINTING AND BOOKBINDING TRADES					
Skilled:					
Compositor (book and job), hand.....	135	91	106	123	180
Compositor, machine.....	122	95	113	117	-----
Machine minder.....	135	-----	106	-----	174
Bookbinder.....	133	-----	120	111	184
Average.....	111	107	135	123	124

¹ The wages and cost of living index number used for New York relate to April, 1925, and December, 1924, respectively.

² The wages and cost of living index numbers used for Paris relate to March, 1925.

APPENDIX III

AVERAGE WEEKLY EARNINGS OF ADULT RAILWAY MEN IN GREAT BRITAIN, MARCH, 1921, 1923, AND 1925

Classes of labor	Average weekly salary or wage rates			Average actual weekly earnings		
	1921	1923	1925	1921	1923	1925
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Carters.....	75 6	54 8	53 5	79 2	58 1	58 11
Coach cleaners.....	71 0	49 11	-----	78 8	54 8	-----
Checkers.....	77 9	56 10	55 5	79 11	59 11	59 6
Clerks.....	84 4	80 4	81 5	102 6	83 6	84 0
Engine cleaners.....	65 7	47 10	-----	70 0	52 10	-----
Engine drivers and motormen.....	102 4	86 8	87 5	115 7	101 7	102 7
Firemen and assistant motormen.....	77 8	65 1	65 8	85 10	75 10	76 5
Guards.....	81 3	63 8	64 4	88 0	72 6	73 4
Permanent way:						
Ganger.....	76 11	56 7	56 0	88 0	63 7	63 7
Subgangers.....	73 3	53 1	-----	80 5	57 11	-----
Undermen.....	71 9	51 4	50 10	79 3	56 7	58 11
Porters:						
Merchandise staff.....	72 4	51 7	51 1	74 0	53 4	54 4
Traffic department, grade 1.....	72 2	51 5	-----	78 8	55 3	-----
Traffic department, grade 2.....	67 9	47 4	47 4	73 7	52 0	51 10

AVERAGE WEEKLY EARNINGS OF ADULT RAILWAY MEN IN GREAT BRITAIN, MARCH, 1921, 1923, AND 1925—Continued

Classes of labor	Average weekly salary or wage rates			Average actual weekly earnings		
	1921	1923	1925	1921	1923	1925
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Shunters:						
Class 1.....	83 6	64 9	65 0	90 9	74 5	72 5
Class 2.....	79 9	59 10	-----	86 7	65 5	-----
Class 3.....	76 6	55 6	55 0	82 9	61 2	60 6
Class 4.....	72 7	51 10	-----	78 5	56 1	-----
Signalmen.....	77 11	59 4	59 4	90 2	68 4	68 1
Station masters, yardmasters, etc.....	103 6	104 0	104 9	129 6	112 10	113 0
Ticket collectors:						
Class 1.....	79 0	58 0	-----	88 6	65 5	-----
Class 2.....	74 1	54 1	-----	82 4	59 10	-----
Locomotive, coach and freight-car departments:						
Carpenters, joiners, and shipwrights.....	80 1	61 7	-----	98 7	70 9	-----
Coach and freight-car builders and repairers.....	73 7	57 9	59 6	97 8	74 3	79 9
Erectors, fitters, and turners.....	77 0	62 7	62 8	100 5	77 1	80 5
Erectors, fitters, and turners' assistants.....	64 1	52 2	-----	88 3	59 1	-----
Laborers.....	62 4	45 11	45 8	78 11	54 3	57 6
Machinists and machine men.....	70 5	54 7	55 2	93 0	69 0	75 3
Painters.....	71 11	56 2	-----	94 8	70 2	-----
Riveters.....	75 10	60 4	-----	99 1	79 4	-----
Smiths.....	78 3	63 7	63 8	103 7	77 4	81 6
Strikers.....	65 10	50 5	-----	85 6	61 11	-----
Civil engineering:						
Carpenters, joiners, and shipwrights.....	76 4	60 5	-----	88 8	64 7	-----
Laborers.....	62 4	46 0	46 4	75 0	49 8	52 6
Painters.....	68 9	53 11	-----	79 10	58 1	-----

The figures for March, 1925, remained in operation until the end of June. As from July 1, 1925, however, the bonus additions, payable to some grades, were reduced by 1s. a week (for men) under the operation of a cost-of-living sliding-scale agreement, and the standard rates, inclusive of bonus, of almost all classes of workers, including the grades specified in the above table, then became identical with those payable on March 29, 1924, and still remain at that level.

APPENDIX IV

TRADE BOARD RATES (JUNE, 1925)

General minimum time rates for the lowest class of adult workers. (Except where otherwise shown the rates are operative at the age of 18 in the case of females and at 21 in the case of males.)

Date of establishment of board	Trade	Female workers, rate per hour	Male workers, rate per hour
1910	Chain ^{1 2}	d.	s. d.
1910	Lace ¹	6½	1 4½
1910	Paper box ¹	7½	1 0½
1914	Shirtmaking.....	6½	1 2
1914	Sugar, confectionery, etc.....	6½	1 0
1914	Tin box.....	7½	1 1
1914	Hollow ware.....	6½	0 11½
1919	Tobacco.....	9½	1 3½
1919	Laundry:		
	Cornwall and North of Scotland.....	6½	1 1½
	Rest of Great Britain.....	7	1 1½
1919	Boot and shoe repairing ¹	10½	1 3
1919	Paper bag ¹	7½	1 1¾

¹ These rates are dependent on the "Cost-of-living" figure and fluctuate accordingly.

² The minimum rates in the chain trade and the lace-finishing trade are not fixed by reference to sex. The rates shown under the column "Female workers" are those applicable to work wholly or mainly performed by women, and the rates shown under the column "Male workers" are those applicable to work wholly or mainly performed by men.

³ At 22 years of age.

⁴ At 24 years of age.

⁵ At 21 years of age.

TRADE BOARD RATES (JUNE, 1925)—Continued

Date of establishment of board	Trade	Female workers, rate per hour	Male workers, rate per hour
1919	Corset	d.	s. d.
1919	Brush and broom ¹	5 6 $\frac{3}{4}$	1 11 $\frac{1}{2}$
1919	Fur	8 $\frac{3}{4}$	1 2
1919	Rope, twine, and net	6 $\frac{3}{4}$	0 10
1919	Jute	6 $\frac{3}{4}$	0 9 $\frac{1}{2}$
1919	Tailoring: ²		
	Ready-made and wholesale bespoke	6 $\frac{3}{4}$	1 0 10 $\frac{3}{4}$
	Retail bespoke	7 $\frac{1}{2}$	1 0
1919	Women's clothing: Wholesale mantle and costume	6 $\frac{3}{4}$	0 10 $\frac{3}{4}$
1919	Dressmaking and women's light clothing: England and Wales—		
	Retail bespoke section	7 $\frac{1}{2}$	1 0
	Other sections	7 $\frac{1}{2}$	1 0
	Scotland—		
	Retail branch	7 $\frac{1}{2}$	1 2
	Other branches	6 $\frac{3}{4}$	1 2
1919	Coffin furniture and cerement making: ¹		
	Coffin furniture section	6 $\frac{3}{4}$	1 2 $\frac{1}{2}$
	Cerement making section	6 $\frac{3}{4}$	1 2 $\frac{1}{2}$
1920	Aerated water:		
	England and Wales	6 $\frac{3}{4}$	1 0 $\frac{1}{2}$
	Scotland—		
	Orkney and Shetland Islands	5 $\frac{1}{2}$	0 11 $\frac{1}{2}$
	Rest of Scotland	6 $\frac{3}{4}$	1 0 $\frac{1}{2}$
1920	Hat, cap, and millinery:		
	England and Wales	7	1 1
	Scotland—		
	Wholesale hat and cap branch	7 $\frac{1}{2}$	1 2
	Other branches	7 $\frac{1}{2}$	1 2
1920	Perambulators, etc. ¹	7 $\frac{1}{2}$	1 0
1920	Flax and hemp	6 $\frac{3}{4}$	0 10 $\frac{1}{2}$
1920	Button making	6 $\frac{3}{4}$	1 1 $\frac{1}{2}$
1920	Stamped or pressed metals	6 $\frac{3}{4}$	0 11
1920	Pin, hook and eye	6 $\frac{3}{4}$	0 10 $\frac{3}{4}$
1920	Hair, bass and fiber	6 $\frac{3}{4}$	0 11 $\frac{1}{4}$
1920	Milk distributive:		
	England and Wales	6 $\frac{3}{4}$	0 10 $\frac{1}{2}$
	Scotland	7 $\frac{1}{2}$	1 1
1920	Linen and cotton handkerchiefs, etc.	6 $\frac{3}{4}$	0 11 $\frac{1}{2}$
1920	Toy	6 $\frac{3}{4}$	1 0
1920	General waste reclamation	6 $\frac{3}{4}$	1 0 $\frac{3}{4}$
1920	Cotton waste reclamation:		
	England and Wales	7	1 0
	Scotland	6 $\frac{3}{4}$	1 0
1920	Made-up textiles	6 $\frac{3}{4}$	0 10 $\frac{3}{4}$
1921	Ostrich leathers, etc.	7	1 0
1921	Boot and floor polish	7 $\frac{1}{2}$	1 1 $\frac{1}{2}$
1921	Sack and bag	6 $\frac{3}{4}$	0 11 $\frac{1}{2}$

¹ These rates are dependent on the "Cost-of-living figure" and fluctuate accordingly.

² At 22 years of age.

³ At 24 years of age.

⁴ At 21 years of age.

⁵ The acts had been previously applied (in 1909) to a portion of this trade.

⁶ According to population.

It is necessary to give wages for both sexes, as women predominate among the trades represented. The Labour Year Book, 1926, gives a similar table, but on a time and piece basis, which is not as representative as the above hourly basis, since the percentage of full time worked is not given.

APPENDIX V

HOURS PER WEEK AND OVERTIME RATES IN LEADING INDUSTRIES

Industry	Recognized hours of labor, June, 1925	Overtime rates		
		Ordinary	Saturday	Sunday
MINING AND QUARRYING				
Coal mining:				
Underground workers.....	7 per shift ¹	1½.....	1½ ²	1½ ²
Surface workers.....	46½.....	1½.....	1½ ²	1½ ²
Slate quarrying.....	47 and 47½ ¹	1½ (1½ after 2 hours).....		2.....
METAL, ENGINEERING, AND SHIPBUILDING				
Pig-iron manufacture:				
Shift workers.....	8 per shift (approximately 56 per week).....			
Day workers.....	47 (usually).....	1½ (1½ after 2 hours).....		2.....
Iron and steel manufacture:				
Shift workers (steel smelting).....	8 per shift (approximately 46 per week).....		1½.....	
Shift workers (iron and steel rolling).....	8 per shift (approximately 42 per week).....		1½.....	
Shift workers (gas producer men, etc.).....	8 per shift (approximately 56 per week).....			
Day workers.....	47 (usually).....	1½ (1½ after 2 hours).....		2.....
Railway workshops, running sheds, etc.....	47.....	1½ (1½ after 2 hours and for nightwork).....		2.....
Heating and domestic engineering.....	47.....	1½ (1½ after 2 hours).....	1½.....	2.....
Tin-plate manufacture:				
Day workers.....	47.....	do.....		2.....
Lead smelting: Day workers.....	47.....	do.....		2 (to 6 a. m. Monday).....
Copper smelting and refining: Day workers.....	47.....	do.....		2.....
Electric cable making.....	47.....	do.....		2.....
Hollow ware.....	47 ⁴	1½ ⁴	1½ ⁴	2 ⁴
Stamped or pressed metal wares.....	47 ⁴	1½ (1½ after 2 hours) ⁴	1½ ⁴	2 ⁴
Ammunition, tube, and wire-rope making.....	47.....	1½ (1½ after 4 hours).....	1½ (after 6 p. m.).....	1½.....
Engineering and boiler making:				
Time workers—				
Day shift.....	47.....	1½ (2 after midnight).....		2.....
Night shift.....	47.....	1½ (on daywork rate).....		2.....
Pieceworkers—				
Day shift.....	47.....	Piece rate plus 50 per cent of time rate.....		2.....
Night shift.....	47.....	Piece rate plus 66½ per cent of time rate.....		2.....
Shipbuilding:				
Time workers—				
Day shift.....	47.....	1½.....	(¹).....	2.....
Night shift.....	47.....	1½.....	(¹).....	2.....
Pieceworkers—day shift.....	47.....	1½ of piecework earnings.....	(¹).....	1½ of piecework.....
TEXTILES				
Cotton industry.....	48.....	1½ (1½ after 2 hours).....	1½.....	1½.....
Wool-textile industry.....	48.....	do.....	1½.....	1½.....

¹ The number of shifts worked per week varies in different districts and according to the state of trade.

² Payable from commencement of the Saturday afternoon shift to the commencement of the Sunday night shift.

³ The hours quoted are those for the summer months; in winter the hours are less.

⁴ Hours, as specified in trade board orders, beyond which overtime rates are payable.

⁵ As specified in trade board orders.

HOURS PER WEEK AND OVERTIME RATES IN LEADING INDUSTRIES—Continued

Industry	Recognized hours of labor, June, 1925	Overtime rates		
		Ordinary	Saturday	Sunday
CHEMICALS, BRICK, POTTERY				
Cement making.....	48.....	1½	1½	2.
Paint, color, and varnish manufacture.....	47.....	1½ (1½ after 2 hours).	1½	2.
CLOTHING				
Boot and shoe manufacture.....	48.....	1½	1½	
Shirt making.....	48 ⁴	1½ (1½ after 2 hours, 2 after 4 hours). ⁵	1½ (1½ after 2 hours, 2 after 4 hours). ⁵	2. ⁶
TRANSPORTATION				
Railway service (traffic section):				
Day workers.....	48.....	1½		1½
Night workers.....	48.....	1½		
Tramway.....	48.....	1½ (1½ after 2 hours).		1½.
Dock labor:				
Meal times paid for.....	44 (8 per day)	1½	1½ (2 after 5 p. m.).	2.
Meal times not paid for.....	do.	1½	1½ (2 after 5 p. m.).	2.
BUILDING AND ALLIED TRADES				
Building trade.....	46½ ¹	1½ (1½ after 2 hours, 2 after 4 hours).	1½ (2 after 4 p. m.).	2.
Electrical installation: Day workers.....	47.....	1½ (2 after midnight).	(1).....	2.
FOOD, DRINK, AND TOBACCO TRADES				
Flour milling: Shift workers.....	8 per shift, 44 per week.	1½ (1½ after 10 hours per week).	1½	2.
Breweries.....	48.....	1½ (1½ after 2 hours).	1½	2.
PRINTING				
Printing, bookbinding, and allied trades.....	48.....	1½ ⁷	2 ⁷	3. ⁷
PUBLIC UTILITY SERVICE				
Electricity supply: Shift workers.....	8 per shift ⁸	1½ (1½ after 2 hours, 2 after 4 hours). ⁹		1½ or 2. ¹
Day workers.....	47.....	1½ (1½ after 2 hours, 2 after 4 hours). ⁹		2. ¹
LEATHER				
Leather tanning and currying.....	48.....	1½ (1½ after 2 hours). ¹⁰		2.

¹ The number of shifts worked per week varies in different districts and according to the state of trade.
² At 24 years of age.
³ At 21 years of age.

⁴ The hours quoted are those applicable during the statutory summer period, except in districts where it is agreed to work 44 hours. Except in the statutory summer period the hours are generally 44. In the principal towns in Scotland and in some towns in England and Wales, 44 hours have been agreed upon for the summer period also.

⁵ Compositors only.

⁶ In some towns shift workers average 6 shifts per week and in others 7 shifts per week.

⁷ There is no general agreement, but the conditions shown appear in the majority of local agreements.

⁸ In the case of "wet workers" in the light leather and chrome tanning section, the first 5 hours are paid for at ordinary time rates, the second 5 hours at time and a quarter, and subsequent hours at time and a half.

APPENDIX VI

MEMBERSHIP IN LABOR UNIONS

Unions	Number of unions at end of—		Total membership	
	1897	1924	1897	1924
Agriculture, horticulture, etc.....	2	3	2,430	61,458
Mining and quarrying.....	83	113	294,228	966,031
Pottery and glass.....	42	17	13,642	30,529
Metal, engineering and shipbuilding:				
Iron, steel, tin-plate, etc., manufacture.....	13	6	34,161	92,519
Engineering, iron founding, shipbuilding, and other metal working.....	268	109	288,242	586,455
Textile:				
Cotton.....	175	168	191,001	366,921
Woolen and worsted.....	27	28	10,303	79,413
Linen and jute.....	24	23	16,467	33,910
Hosiery.....	14	10	5,110	28,034
Bleaching, dyeing, finishing, etc.....	37	28	17,769	73,465
Other textiles.....	37	24	10,340	28,225
Leather (other than boot and shoe).....	34	20	7,953	10,597
Clothing:				
Boot and shoe.....	15	9	41,146	88,103
Tailoring and other clothing.....	33	21	33,439	76,918
Food, drink, and tobacco.....	21	9	13,693	27,651
Woodworking and furnishing:				
Furnishing.....	19	8	16,063	31,968
Coach building.....	11	3	8,978	31,929
Other.....	68	21	13,303	30,483
Paper, printing, etc.....	46	24	52,239	187,087
Building, decorating, contracting, etc:				
Bricklayers and masons.....	13	4	66,151	65,071
Carpenters and joiners.....	5	1	68,369	112,050
Painters and decorators.....	28	7	19,001	53,746
Builders' laborers.....	56	6	27,918	57,530
Other.....	31	30	28,391	46,946
Transport:				
Railway service.....	8	9	103,179	506,854
Seamen.....	23	12	38,563	91,860
Other (road transport, dock labor, etc.).....	39	23	62,233	425,634
Commerce, distribution, and finance: Shop assistants, clerks, warehouse workers, etc.....	6	19	6,250	156,732
Banking and insurance.....	5	19	4,650	78,097
National and local government.....	68	272	63,479	318,785
Teaching.....	6	17	45,319	194,946
Entertainments and sport.....	3	8	5,321	33,968
Miscellaneous.....	49	64	17,571	45,952
General labor.....	44	20	103,715	511,206
Total.....	1,353	1,155	1,730,617	5,531,143

APPENDIX VII

SHELTERED AND UNSHELTERED TRADES

PERCENTAGE INCREASE IN TIME RATES OF WAGES

Trade	Sheltered wages		Trade	Unsheltered wages	
	December, 1920	June, 1925		December, 1920	June, 1925
Building.....	Per cent 149-225	81-106	Coal mining.....	Per cent 175-194	49-67
Railways.....	126-272	85-161	Iron mining.....	200-300	30-43
Roads.....	167	108	Pig-iron manufacture.....	225-350	40-85
Tramways.....	140-157	90-106	Iron and steel.....	159-284	26-75
Printing, etc.....	162-176	107-117	Engineering.....	123-210	44-76
Baking.....	135-170	88-112	Shipbuilding.....	121-208	35-68
Municipalities.....	181	101	Cotton.....	160	61
			Wool.....	181-216	80-90
			Chemicals.....	207-224	106-115
			Boots and shoes.....	127-141	100-112

COMPARISON OF AVERAGE WEEKLY WAGE RATES

Sheltered trades	Weekly wage rates	Unsheltered trades	Weekly wage rates
SKILLED LABOR		SKILLED LABOR	
Building:	s. d.	Engineering:	s. d.
Bricklayers.....	73 6	Iron molders.....	60 0
Masons.....	73 8	Fitters, turners.....	56 6
Plumbers.....	73 7	Shipbuilding:	
Carpenters.....	73 5	Shipwrights.....	55 7
Painters.....	73 0	Ship joiners.....	57 9
Railways:		Boots and shoes.....	60 0
Engine drivers.....	72-90 0		
Guards.....	51-65 0		
Printing:			
Compositors.....	73 9		
Bookbinders.....	73 4		
Baking forehands.....	70 8		
UNSKILLED LABOR		UNSKILLED LABOR	
Building.....	55 7	Coal mining, per shift.....	7 7½
Railways:		Iron and steel.....	39 7
Porters.....	47-49 0	Engineering.....	40 2
Way.....	51-54 0	Shipbuilding.....	38 5
Printing.....	55 0	Wool.....	52 8
Municipalities.....	53 9	Chemicals.....	49 6

APPENDIX VIII

APPROXIMATE WAGE PAYMENTS

Agriculture: Average rate, males, 30s. to 36s. per week (minimum as directed by agriculture wages board under agriculture wages (regulation) act, 1924).

Baking and confectionery: Forehands, 68s. 6d. to 74s. per week; table hands, 62s. 6d. to 65s. per week; machinemens, mixers, overmen, 69s. per week; night-work, 5s. additional.

Builders, per week, October, 1925: Bricklayers, 73s. 6d.; masons, 73s. 8d.; carpenters, 73s. 5d.; plumbers, 73s. 7d.; plasterers, 73s. 10d.; painters, 73s.; laborers, 55s. 7d. Per hour, May, 1926: Bricklayers, 1s. 10d.; masons, 1s. 10d.; carpenters, 1s. 10d.; plumbers, 1s. 10d.; plasterers, 1s. 11d.; painters, 1s. 9½d.; laborers, 1s. 4d.

Engineering and shipbuilding: Engineering—Fitters, turners, 56s. 6d. to 65s. 11d. per week; iron molders, 60s. per week; patternmakers, 60s. 11d. per week; laborers, 40s. 2d. per week. Shipbuilding—Shipwrights, 55s. 7d. per week; shipjoiners, 57s. 9d. per week; laborers, 38s. 5d. per week.

Dock labor: Per eight-hour day (September, 1925) 11s. to 13s. 6d.

Gas workers: Gasfitters, 52s. 6d. to 60s. per week; laborers, 40s. to 49s. 3d. per week.

Electricity: Switchboard attendants to 5,000 kw., 1s. 7½d. per hour; above 5,000 kw., 1s. 10½d. per hour; turbine mechanics, 1s. 7½d. per hour; drivers, 1s. 6d. per hour; installation, 1s. 10½d. per hour; unskilled labor, 54s. 10d. per week.

Furniture: Cabinetmakers (London), 82s. 3d. per week; French polishers, upholsterers, 74s. 5d. per week. Average of 17 large towns—Cabinetmakers, 74s. 9d. per week; upholsterers, 74s. 8d. per week; French polishers, 74s. 6d. per week; (in May, 1926, rate of 1s. 8d. per hour set).

Vehicle building: Woodworkers, smiths, 1s. 7½d. per hour; painters, trimmers, 1s. 7d. per hour; coachfitters, 1s. 5½d. per hour.

Railways. average weekly earnings, March, 1926: Carters, 58s. 3d.; drivers, 106s.; firemen, 78s. 6d.; brakemen, 75s. 6d.; porters (freight), 53s. 10d.; porters (passenger), 50s. 9d.; shunters, 74s. 7d.; signalmen, 63s.; station masters, 112s. 2d.; coach builders, 79s. 1d.; machinists, 73s.; laborers, shop, 56s. 7d.; laborers, road, 51s. 3d.

Road transport: One-horse driver, 52s. to 53s. 2d. per week; 2-ton motor, 62s. to 66s. per week.

Sea transport (without food): Able seamen, 62s. per week; firemen, 62s. per week; boatswains, 67s. per week; quartermasters, 64s. 6d. per week.

Omnibus: Drivers, first six months, 80s. per week; thereafter, 86s. 6d. per week; conductors, first six months, 73s. 6d. per week; thereafter, 79s. 6d. per week; general garage labor, 1s. 3½d. per hour.

Tramways: Conductors, drivers—London, 64s. to 73s. per week; Liverpool, 62s. to 65s. per week; Newcastle, 56s. 6d. to 62s. 6d. per week; Belfast, 53s. to 65s. per week. Average, 50 towns, September, 1925—Drivers, 59s. 2d. per week; conductors, 54s. 9d. per week.

Road laborers, 54s. per week.

Cable making: Male, 49s. 6d. to 60s. 8½d. per week; female, 28s. 6d. to 32s. 6d. per week.

Gas mantles (employees 95 per cent female): Skilled, 6½d. per hour; piece-workers, 25 per cent more.

Soapmaking: Male, 54s. to 56s. per week; female, 30s. per week.

Printing and bookbinding (average weekly rates, 26 towns, September, 1925): Hand compositors, 73s. 9d. per week; bookbinders, machine rulers, 68s. 6d. to 77s. 6d. per week.

Brush and broom: Skilled adults, 1s. 2½d. per hour.

Basket making: Skilled adults, 1s. 3½d. per hour.

Glues, chemical manure, 46s. 3d. per week.

Paper: Unskilled, 11½d. to 1s. 1¼d. per hour; semiskilled, 1s. to 1s. 1¼d. per hour; skilled, 1s. 6d. per hour; paper boxes, minimum, 49s. per week; paper bags, minimum, 52s. 6d. per week.

Woolen textiles: Yarn warehousemen, 54s. 10d. per week; wool sorters, 68s. 9d. per week.

Cotton hosiery, minimum, 44s. 4d. per week.

Silk dyeing: Finishing, 51s. 3d. per week.

Boots and shoes: Heel building, shoe and stockrooms, 57s. per week; other departments, 60s. per week; skilled labor, June, 1925, 60s. per week; boot and shoe repairing, 67s. to 72s. per week.

Leather belting, 1s. 3½d. per hour.

Meat, wholesale and retail distributive: Male, 55s. to 80s. per week; female, 25s. to 40s. per week.

Seed crushing: Oil milling, minimum, 57s. 6d. per week.

Public works contracting: Granite masons, 1s. 9d. per hour; curb fixers, 1s. 8d. per hour; steamroller drivers, 1s. 7½d. per hour; scaffolders, 1s. 6½d. per hour; platelayers, pipe joiners, 1s. 4½d. to 1s. 6½d. per hour; drainlayers, tarpot men, 1s. 4½d. per hour; concrete levelers, 1s. 3½d. per hour.

Municipal labor, leading towns, February, 1926, wages per week: Road labor—London, 62s. 1d.; Birmingham, 51s. 10½d.; Cardiff, 56s. 9½d.; Glasgow 56s.; Liverpool, 53s. 2d.; Swansea, 62s. 8d. Refuse collection—Birmingham, 53s. 10½d.; Cardiff, 56s. 9½d.; Liverpool, 58s. 11d.; Swansea, 62s. 8d.

Trade board rates per hour: Aerated waters (England and Wales), female 6½d., male 1s. ½d.; boot and floor polish, female 7½d., male 1s. 1½d.; boot and shoe repairing, female 10½d., male 1s. 3d.; brush and broom, female 6½d., male 11½d.; button making, female 6½d., male 1s. 1½d.; coffin furniture and cerement making, male 1s. 2½d.; coffin furniture, female 6½d.; cerement making, female 8d.; corset, female, 7d., male 1s. 1d.; cotton waste reclamation, England and Wales, female 7d., Scotland, female 6½d.; dressmaking and women's light clothing, retail, bespoke section, female 6½d.; flax and hemp, female 6½d., male 10½d.; fur, female 8½d., male 1s. 2d.; general waste materials reclamation, male 11d.; hair, bass, and fiber, female 6½d., male 11½d.; hat, cap, and millinery, England and Wales, female 7d., male 1s. 1d.; hollow ware, female 6½d., male 11½d.; jute, female 6½d., male 10½d.; lace finishing, female 6½d.; laundry, Cornwall and north of Scotland, female 6½d., rest of Great Britain, female 7d.; linen and cotton handkerchief, female 6½d., male 1s.; made-up textiles, female 6½d., male 10½d.; ostrich and fancy feather, etc., female 7d., male 1s.; paper bag, female 7½d., male 1s. 1¼d.; perambulator and invalid carriage, female 7d., male 1s.; pin, hook and eye, female 6½d., male 10½d.; ready-made and wholesale bespoke tailoring, female 7d., male 11½d.; rope, twine, and net, female 6½d., male 10d.; sack and bag, female 6½d., male 11½d.; shirt making, female 7d., male 1s. 2d.; stamped or pressed metal wares,

female 6½d., male 11d.; sugar confectionery, etc., female 6¼d., male 1s.; tin box, female 7¼d., male 1s. 1d.; tobacco, female 9½d., male 1s. 3¼d.; toy, female 6¼d., male 1s. ½d.; wholesale mantle and costume, female 7d., male 11½d.

Coal miners' earnings (hewer's average, 76s. per week): South Yorkshire, 90s. per week; South Wales, 90s. per week; Northumberland, 73s. per week; Lancashire, Scotland, Midlands, 70s. per week; subsistence wage, 41s. 6d. to 52s. 6d.; underground labor (1923), 52s. 9d.; pithead and screen men (1923), 45s.

AVERAGE EARNINGS IN COAL

[See also section on coal wages]

District	Per man shift	Actual weekly	District	Per man shift	Actual weekly
	s. d.	s. d.		s. d.	s. d.
Northumberland.....	9 4.3	42 6	Bristol.....	9 2.46	47 6
Durham.....	9 11.46	45 2	Forest of Dean.....	8 10.97	39 7
South Wales.....	10 8.53	52 8	Somerset.....	8 10.44	42 8
Eastern district.....	11 4.62	49 2	Kent.....	12 9.98	65 6
Lancaster and Cheshire.....	10 0.69	44 4	Scotland.....	10 3.42	52 1
North Wales.....	9 4.62	42 9			
South Staffordshire, etc.....	8 8.63	43 10	Great Britain, average.....	10 6.77	48 6
Cumberland.....	10 9.4	48 3			

APPENDIX IX

PERCENTAGE COMPARISON OF BRITISH WAGES, 1909-1913, WITH SEPTEMBER, 1925

SKILLED MEN

Occupation	Wages for full week, September, 1925	Per cent increase over 1909-1913
Railway service:		
Drivers.....	87 5	Nearly 125.
Guards.....	64 4	Do.
Signalmen.....	59 4	Do.
Coal mining:		
Hewers.....	76 0	67.
Timbermen.....	65 0	68.
Engineering: Fitters.....	56 6	48 to 50.
Shipbuilding: Shipwrights.....	55 7	45 to 55.
Printing:		
Hand compositors on books.....	73 9	Between 110 and 130.
Bookbinders, machine rulers.....	73 4	
Baking: Table hands.....	64 9	About 120.
Boots and shoes: Minimum time rates.....	60 0	About 100 to 110.
Building:		
Painters.....	73 0	110 to 115.
Other skilled men.....	73 5	90 to 100.

SEMISKILLED MEN AND LABORERS

Occupation	Pre-war	Postwar	Per cent increase
	s. d.	s. d.	
Heavy chemicals:			
Laborers.....	23 0	1 49 0	115
Process laborers.....	35 0	1 72 0	100
Boots and shoes:			
Skilled labor.....	30 0	60 0	100
Heel building, stock rooms.....	17-18 0	36 0	100
50,000 workpeople.....	21 0	46 0	120
Ready-made tailoring:			
Men.....	25 0	46 0	84
Women.....	13 6	28 0	100
Dock labor.....	1 4 6	1 11 0	
One-horse drivers.....	to 6 8	to 13 6	
Tramways:	25 7	53 2	100
Drivers.....	30 6	59 2	94
Conductors.....	26 7	54 9	106
Printing and bookbinding:			
Hand compositors.....	35 8	73 9	107
Binders and machine rulers.....	33 11	73 4	107
Furniture making:			
Cabinetmaking.....	39 9	74 9	88
Upholsterers.....	38 9	74 8	93
French polishers.....	37 1	74 6	101
Baking: Table hands.....	30 1	64 9	115

¹ About.² Per 10-hour day.³ Per 8-hour day.

SEMISKILLED MEN AND LABORERS

Occupation	September, 1925	Per cent over 1909-1913
Railway service:		
Goods porters.....	50 0	About 150.
Engine cleaners.....	46 4	Do.
Coal mining: Subistence wages, surface and underground.....	41 6	From 65 to 90.
Engineering: Laborers.....	to 52 6	
Shipbuilding: Laborers.....	40 2	Between 80 and 85.
Dock laborers, per day.....	38 5	About 75 to 80.
Electricity supply: Laborers.....	11 0	About 90 to 140.
Gas works: Laborers.....	to 13 6	
Municipal laborers.....	54 10	About 120.
Tramways:	52 11	About 115.
Conductors.....	53 5	Nearly 110.
Drivers.....	54 9	About 112.
Road transport: 1-horse carters.....	59 2	About 100.
Agriculture (England and Wales): Laborers.....	53 2	About 125.
	29 0	Between 85 and 90.
	to 37 6	

NOTE.—A fairly general reduction in the number of hours per week accompanied the above wage changes.

APPENDIX X

COMPARATIVE TABLE OF WAGES IN THE IRON AND STEEL INDUSTRY

Class of workers and district	Addition to standard rates on—		Increase on June 30, 1925, over level of Aug. 4, 1914 (per cent)
	Aug. 4, 1914 (per cent)	June 30, 1925 (per cent)	
Blast-furnace workers:			
Cleveland and Durham	23½ ¹	12½ ²	40 to 85.3
Cumberland	25 ¹	12½ ²	50 to 85.3
South Wales and Monmouthshire	27½	54½	21.
Scotland	22½ and 27½ ¹	24 ¹	(³)
Iron puddlers and rollers:			
Northumberland, Durham, and Cleveland	-2½	57½	62.7 ⁴
West Scotland	On the standard	55	55.7
Iron puddlers and iron and steel rollers: Midlands	do.	65	65.7
Iron and steel rollers and steel smelters south Wales and Monmouthshire (except certain firms in south-west Wales)	27½	54½	21.7
Steel rollers: West Scotland	On the standard	40 ²	(⁵) (⁶)
Steel smelters (various important districts in England and Scotland)	11¼ ⁷	40 ¹	26.7 ⁸
Laborers in steel smelting shops and at iron and steel rolling mills in some of the principal districts in England and Scotland	-13½ ⁹ 23s. a week (approximately).	15 ⁹ 38s. 10d. to 40s. 2d. a week.	33.7 ⁸ 56 to 75.

¹ On old standard.² On new standard.³ The standard rates were increased between August, 1914, and June, 1925; the figures quoted include the estimated effect of such increases.⁴ Plus special bonus.⁵ The figures quoted include the estimated effect of the special bonuses.⁶ No estimate of the effect of the increase of standard rates between August, 1914, and June, 1925, as a percentage of 1914 is available.⁷ These figures are exclusive of the effects of an arrangement made in 1919 when the hours of labor were reduced to eight per shift, whereby contributions were made by the workers, varying according to wages, up to 33½ per cent toward the cost of the third shift, the wages of the lowest paid workers remaining unchanged for the shorter working period. The percentages of increase shown, therefore, apply only to the lower-paid men; for the higher paid men the percentages of increase are lower.⁸ Special bonuses were being paid at June, 1925, to certain of the lower-paid workers. The information available is insufficient to enable the effect of such bonuses to be expressed as a percentage on 1914 rates, but the total percentage increase on the 1914 rates for such workers is in excess of the figures quoted.⁹ Basic process.¹⁰ Acid process.

APPENDIX XI

DECREASE IN WAGES IN 1925

[From the Ministry of Labour Gazette, April, 1926]

Industry group	Number receiving wage—		Amount by which weekly wages were—		Net change
	Increase	Decrease	Increased	Decreased	
Mining, quarrying	9,000	404,000	£1,450	£58,500	-£57,050
Brick, pottery, glass, chemicals, etc.	36,000	1,150	4,650	100	+4,550
Iron and steel	19,000	171,000	900	36,900	-36,000
Engineering, shipbuilding	7,000	1,000	950	50	+900
Other metal	31,000	37,000	4,600	6,250	-1,650
Textile	60,000	59,000	4,250	4,200	+50
Clothing	218,000	6,350	21,900	760	+21,140
Food, drink, tobacco	23,750	10,650	1,850	900	+950
Woodworking, etc.	5,750	4,250	650	400	+250
Paper, printing, etc.	10,500	500	1,700	40	+1,660
Building, etc.	43,500	—	5,000	—	+5,000
Transport	216,000	151,000	13,000	40,400	-27,400
Public utilities	172,000	7,750	16,800	1,200	+15,600
Other	30,500	6,500	2,900	700	+2,200
Total	870,000	860,000	80,600	160,400	-79,800

CHANGES IN WAGES AND NUMBER OF WORKPEOPLE AFFECTED, 1915-1925

[From the Ministry of Labour Gazette, April, 1926]

Year	Number receiving wage—		Amount by which wages were—		Net change
	Increase	Decrease	Increased	Decreased	
1915	4,305,000	—	£867,100	—	+£867,000
1916	4,848,000	250	885,250	£50	+885,200
1917	6,362,000	75	2,986,200	5	+2,986,195
1918	6,924,000	—	3,434,500	—	+3,434,500
1919	6,240,000	100	2,547,200	60	+2,547,140
1920	7,867,000	500	4,739,200	180	+4,739,020
1921	78,000	7,244,000	13,600	6,074,600	-6,061,000
1922	73,700	7,633,000	11,460	4,221,600	-4,210,140
1923	1,202,000	3,079,000	169,000	486,000	-317,000
1924	3,019,000	481,500	616,000	62,100	+553,900
1925	870,000	860,000	80,600	160,400	-79,800

NOTE.—The Gazette does not claim any absolute accuracy for any one entry but as all the years are recorded on a similar basis a relative comparison by years is warranted.

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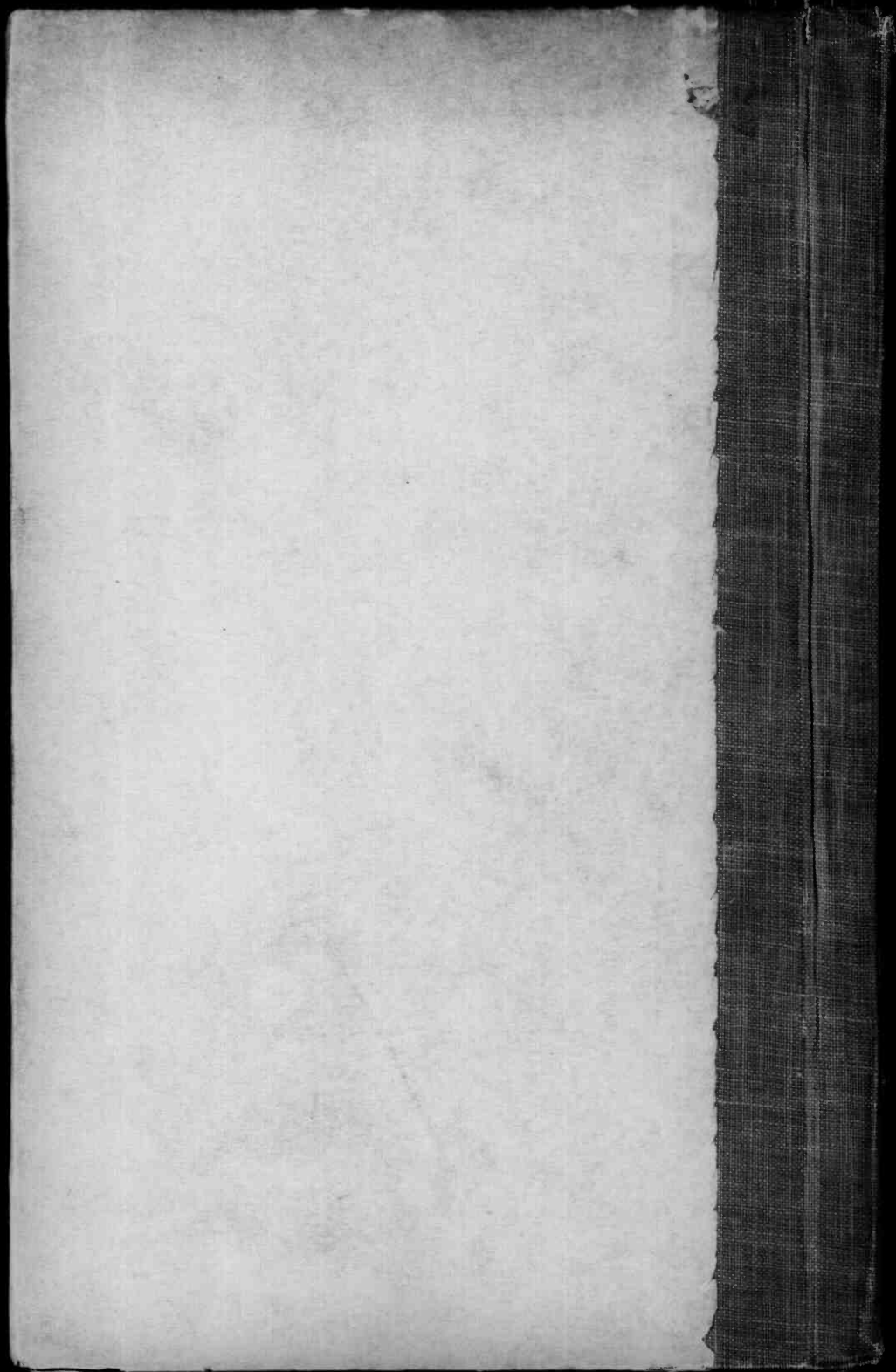
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